WORLD'S "HOTTEST" DEVELOPER

PHOTOGRAPHY

MARCH, 1953

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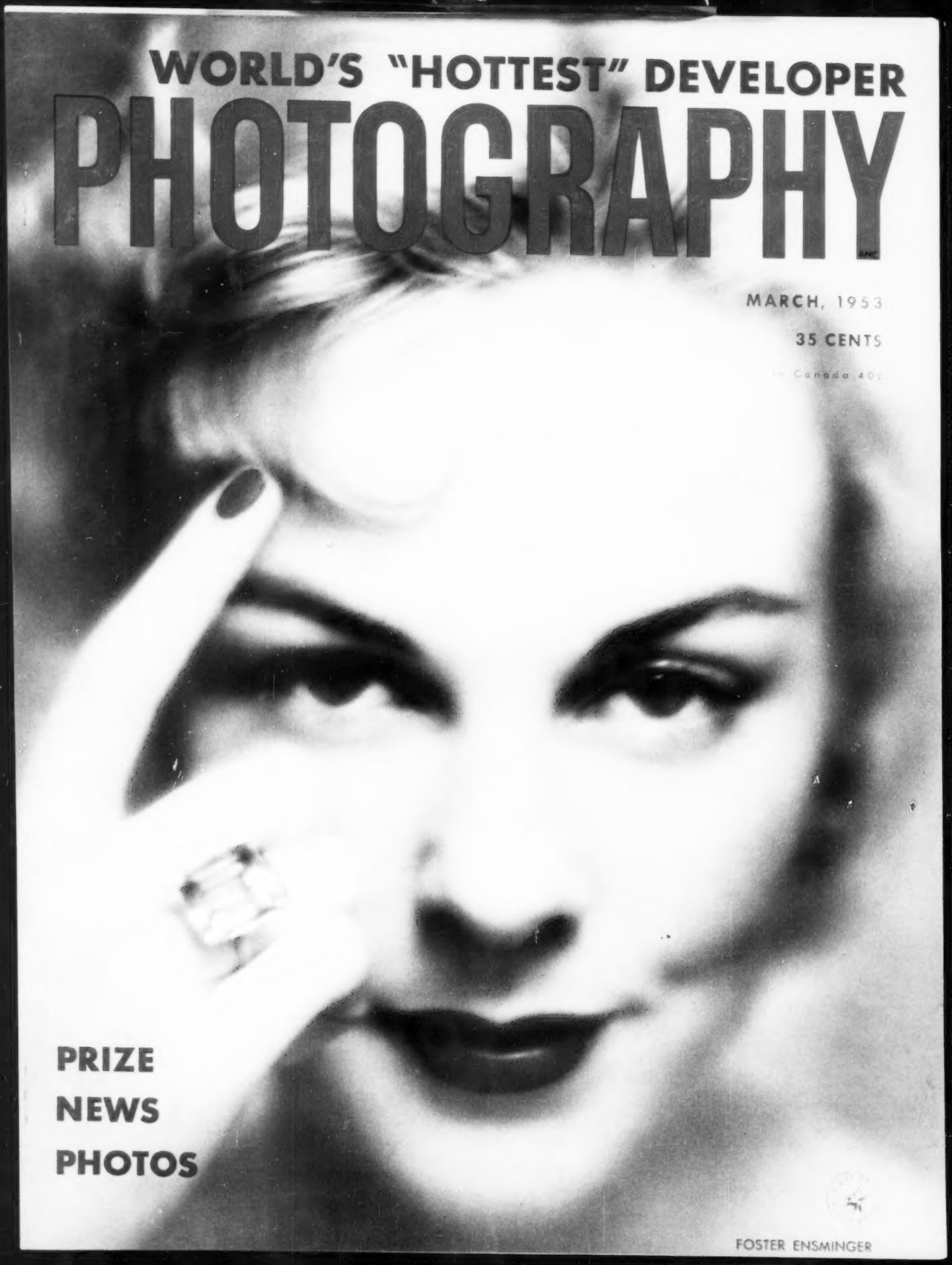

PRIZE
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PHOTOS

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AMAZING *NEW Ansco* DEVELOPING TANK

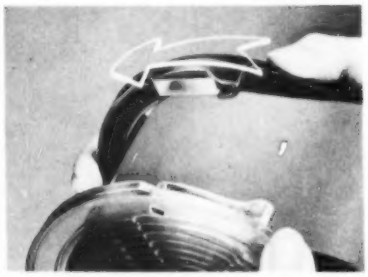
with self-loading spring-grip reel

makes film loading SAFER···and unbelievably EASY!

SEE HOW SIMPLY THE ANSCO REEL LOADS!

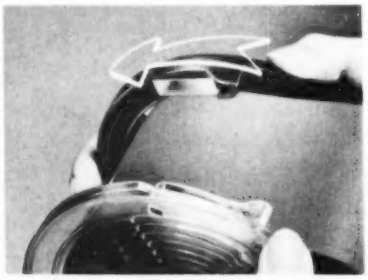
Patented "Grip-Slip" Action Makes Film Loading as Easy as Screwing the Top on a Jar!

1 ALIGN reel flanges. Pull the end of the film easily under the spring-loaded ball bearing ratchets. Then take a firm hold of the flange of the reel . . .



2 GRIP. Twist the flange as far as it will go in one direction (about ⅙ turn). The ball bearings grip the film edges smoothly, pulling the film into the reel . . .

3 SLIP. Now turn the flange in the opposite direction. The film remains stationary while the ball bearing ratchets slip smoothly into position for the next loading motion...



4 GRIP. Another ⅙ turn and two more inches of film slides smoothly on the reel. Just "Grip-Slip" along, as fast as your wrist can go!

YOU won't believe that *any* film tank can be so easy to load—or so considerate of your film—until you try the amazing new Ansco Developing Tank at your photo dealer's!

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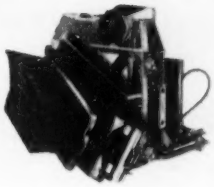

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AT YOUR DEALERS OR WRITE FOR INFORMATION DIRECT TO US

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★ **LENS INTERCHANGEABILITY** Exclusive Snap-Lock permits an almost instantaneous interchange of lenses: Normal, Telephoto or Wide-Angle.

★ **INTERCHANGEABLE BACK** Converts the 23 into a versatile roll-film camera... with the addition only, of the Rollex Roll-Film Holter for either 2¼ x 3¼ or 2¼ x 2¼ negatives.

★ **OTHER FEATURES INCLUDE:**
- ★ Leather Focusing Hood
- ★ 2 Position Body Release
- ★ Adjustable Hand Strap
- ★ Flashgun Bracket
- ★ Accessory Clip
- ★ Depth of Field Scale

★ **THE 23 IS COMPLETE WITH THREE SCHNEIDER COATED LENSES:**
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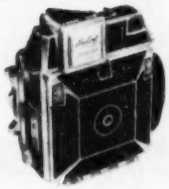

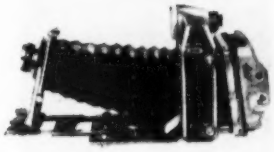

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MARCH, 1953 VOLUME 32, NUMBER 3

PHOTOGRAPHY

Foster Ensminger, veteran New York professional, was experimenting when he made this high-key, soft-focus study of Madelon Mason. He aimed the lens of his Star studio camera through a frame filled with spun glass cut out to reveal the face only. A Kodak No. 1 diffuser was placed on the lens, a 16½-inch f/6.3 Cooke used wide open. Sheets of tissue paper covered two front 1000-watt floods. A dinky covered with pale blue Cellophane added blue highlights; another, uncovered, highlighted the ring. A 750-watt spot above, rear backlighted the hair; an open lamp illuminated the background. Exposure at ½ second was on 8x10 Ektachrome.

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ZIFF-DAVIS PUBLISHING CO.
EDITORIAL AND EXECUTIVE OFFICES:
366 Madison Ave.
New York 17, N. Y.

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PHOTOGRAPHY, including POPULAR PHOTOGRAPHY, Trade Mark Registered. Combined with Amateur Cinematography and Prize Photography Magazine, formerly Everyday Photography.

BRANCH OFFICES: Chicago Office, J. M. Eckert, Midwestern Advertising Manager, 185 N. Wabash Ave., Chicago 1, Ill.; Los Angeles Office, William E. McCahill, Western Advertising Manager, Statler Center, 900 Wilshire Blvd., Los Angeles 17, Calif.

SUBSCRIPTION SERVICE: All communications concerning subscriptions should be addressed to Circulation Dept., 64 E. Lake St., Chicago 1, Ill. Subscribers should allow at least two weeks for change of address.

CONTRIBUTIONS: Contributors are advised to retain a copy of their manuscripts and illustrations. Contributions should be mailed to the New York Editorial Office and must be accompanied by return postage. Contributions will be handled with reasonable care, but this magazine assumes no responsibility for their safety. Any copy accepted is subject to whatever adaptations and revisions are necessary to meet the requirements of this publication. Payment covers all author's, contributor's and contestant's rights, title, and interest in and to the material accepted and will be made at our current rates upon acceptance. All photos and drawings will be considered as part of the material purchased.

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you can burn 4 on one household circuit

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You can burn as many as four on one standard home circuit without blowing fuses. And you can use any standard photolamp fixture or any lamp socket you can aim.

Smallest photoflood lamp made, the new Westinghouse R-30 has a 3-inch face diameter, and a built-in silvered reflector for maximum lumens. Opaque base prevents side glow. Easy to carry. Get your 300-watt reflector now.

Medium screw base
Cost: $1.25 each
Life: 4 hours

300-WATT
R-30

Note: If you don't know the name of your dealer, write Westinghouse Lamp Division, Bloomfield, New Jersey.

YOU CAN BE SURE...IF IT'S
Westinghouse

P-3-3

ALL FINISHED IN 60 SECONDS...

Best pictures you ever took

Snap the shutter, pull a tab, and 60 seconds later lift out a beautiful finished picture . . . the best you ever took. That's what you can do with the Polaroid® Land Camera.

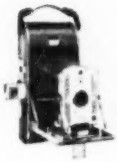
At parties and family gatherings, showing the finished print doubles the fun. On trips, you're always sure of getting the picture, because you see results on the spot. You can shoot again if you're not satisfied.

Polaroid photography is thrifty, too. You don't have to use up a whole roll for the one or two pictures you want right away. You'll never waste a roll trying to make pictures in doubtful light. A single shot will show you if it can be done.

Want to see for yourself? Ask your photo dealer to show you. In 60 seconds you'll hold the evidence in your hand—a brilliant 3¼" x 4¼" finished print. A whisk of the new Polaroid Print Coater and your picture will be preserved with a permanent, hard finish. When you see this exciting camera in action, you'll say, "Why wait days when a minute does it?"

Polaroid Corporation, Cambridge 39, Massachusetts

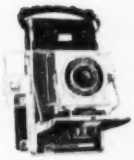
60 seconds after you snap the shutter, lift out a beautiful finished print like this.



Model 95

Why wait days when a minute does it?

POLAROID *Land* CAMERAS



Pathfinder Model 110

it's tough to pull a

fizzle...

it's fun to snap a

sizzle!

When you shoot for keeps, shoot with an Enteco filter — Enteco's famous Skylight, for instance. *It makes the difference that makes the shot* — in outdoor color set-ups when atmospheric conditions are unduly bluish, when haze muffles distant scenics, when weak sunlight turns snow scenes icy.

Enteco magic is built in, by Enteco craftsmen, in Enteco's own optical plant. Step by step — *six times* — your Enteco filter is checked for precision, parallelism, flatness. When professional photographers say Enteco is America's *finest* filter, they've said it all!

Most dealers stock Enteco; any dealer can order it for you. Demand it. Enteco Skylight Filter: only $2.00 in series V, $2.50 in series VI.

FREE • *Filter and film data, and other guides, to give your pictures that professional look. Write NOW.*

NEW! **Enteco MATCHED FILTER Kits and Enteco Lens Hoods**

for your Revere "33" Stereo Camera

Professional results come easier, the minute you equip your Revere "33" stereo camera with Enteco matched filters. Enteco technicians test these filters spectrophotometrically, to give you identically matched pairs!

- **Enteco Mono Filter Kit for Revere "33" Stereo.** *Illustrated.* Contains single set of matched filters. Your choice of more than 20 Enteco types—including Skylight, Type A, Flash 81C—for Kodachrome, Ansco color, and black and white films. **$3.50**

- **Enteco Hamburger Kit for Revere "33" Stereo.** *Not illustrated.* Contains two sets, consisting of Type A and Skylight Filters. In de luxe pigskin hamburger-shaped case, with recess for set of lens hoods. **$9.00**

- **Enteco Series IV Lens Hoods.** Precision built screw-in type. Pair, **$2.80**

Shipments of Enteco accessories for the Revere "33" Stereo are now en route to stores everywhere. If your dealer isn't yet supplied, order direct. You MUST be satisfied — or your money refunded, by return mail.

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FOR AMERICA'S FINEST FILTERS and LENS ATTACHMENTS, SAY: *Enteco*

letters to the editor

Tropical Tree in Ohio?

The author of *Transplant That Tree* in your January issue should be cautioned to use trees which are native to the region in the picture. It seems strange to see a tree native to the California coast framing a typical midwestern scene. Even if it's not a California tree, as I suspect, it would be unusual to find the same tree in suburban Ohio and on a British Honduras waterfront.

Ferrel Atkins
Richmond, Va.

With regard to the Rolofson article: while I agree that many photographs can be improved by means of double printing, I believe that some note should be taken of the appropriateness of the superimposed foreground. Trees on the edge of an airstrip or pines on a Honduran waterfront are not appropriate, I'm afraid.

Thomas H. P. Marshall
Berkeley, Calif.

• *Author Rolofson was clearly more concerned with photographic composition than with geographic details. The tree, a California cypress, might indeed seem out of place to an Ohioan or a Honduran—or to an airplane pilot. But we trust Rolofson got his pictorial point across.*—Ed.

Japanese Sign

At the risk of sounding somewhat pedantic, but in the best interests of Japanese-American relations, I would like to point out a slight error in your caption of the Japanese photograph on page 34 of the January issue. The sign in the photograph reads, "Amerika pobyura fuotogurafui shashinten," or "American Popular Photography photographic exhibit (salon)." There is no mention of "6th" or "annual" as your caption suggests.

Richard L. Threet
Lincoln, Neb.

• *We accept the correction, with the plea that we took our translation from material furnished by the director of the Konishiroku Co., who sent us the picture.*—Ed.

Physical Therapist

You can't imagine my surprise when I saw the picture on page 61 of your January issue (illustrating *Versatile Bounce Light*), showing a young polio victim in New York's Bellevue Hospital being held in the arms of a physical therapist. The reason? I know the young lady well, and would like others to know her as I do. Her name is Peggy Crane, and she was my physical therapy instructor when I was a patient in the rehabilitation ward there. Miss Crane is one of the most sympathetic and understanding persons I have ever known. She has a warm and infectious laugh and the ability to make a person feel like helping himself even when things look blackest. I had developed muscular dystrophy, and had gone to Bellevue to exercise and to try to become adjusted to being confined in a wheelchair for the rest of my life. I'm 25 now. I had been taking pictures since I was 15, but when I got sick I lost interest in photography. Miss Crane revived that interest during the year I was there and inspired me to continue with it, which I am now doing. If it hadn't been for her encouragement and advice I would not be supporting myself through photography, and I certainly would not be as well-adjusted as I am to being handicapped. People like Miss Crane very rarely receive the credit they deserve, and I hope this letter will help Miss Crane and others in her profession realize that their work doesn't go unappreciated by the people around them.

Dick Klappert
Nogales, Ariz.

Word from South Africa

Congratulations to Philippe Halsman for his wonderful cover photo on the October issue of Photography. I would like to see more covers like this, and fewer horrors like that on the September issue. I think a photograph—especially a portrait—should have a natural appeal of its own; the photographer should not resort to trick effects and darkroom magic as people like Mr. Blumenfeld seem to be fond of doing. It is almost as bad as modern art.

Conrad Reitz
Pretoria, South Africa

Texas College

I enjoyed the article on tabletop photography by Charles Warren, titled *What's Inside?* in the December issue, but the City of Belton, where Mary Hardin Baylor College is located, will not like having their college moved to Temple, their rival city nine miles distant.

Geo. L. Carver
Austin, Texas

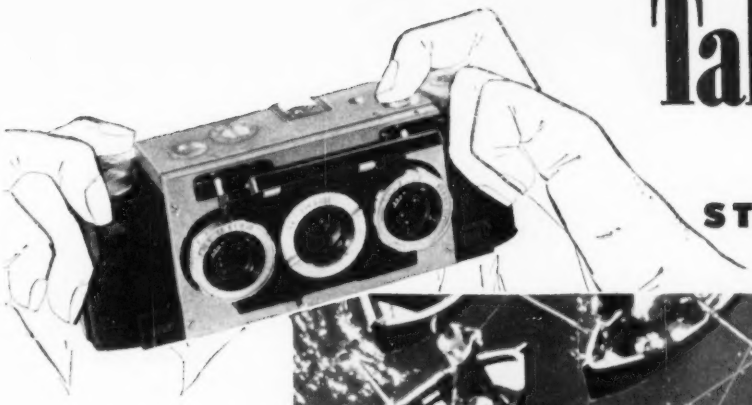
Is this "Invasion of Privacy"?

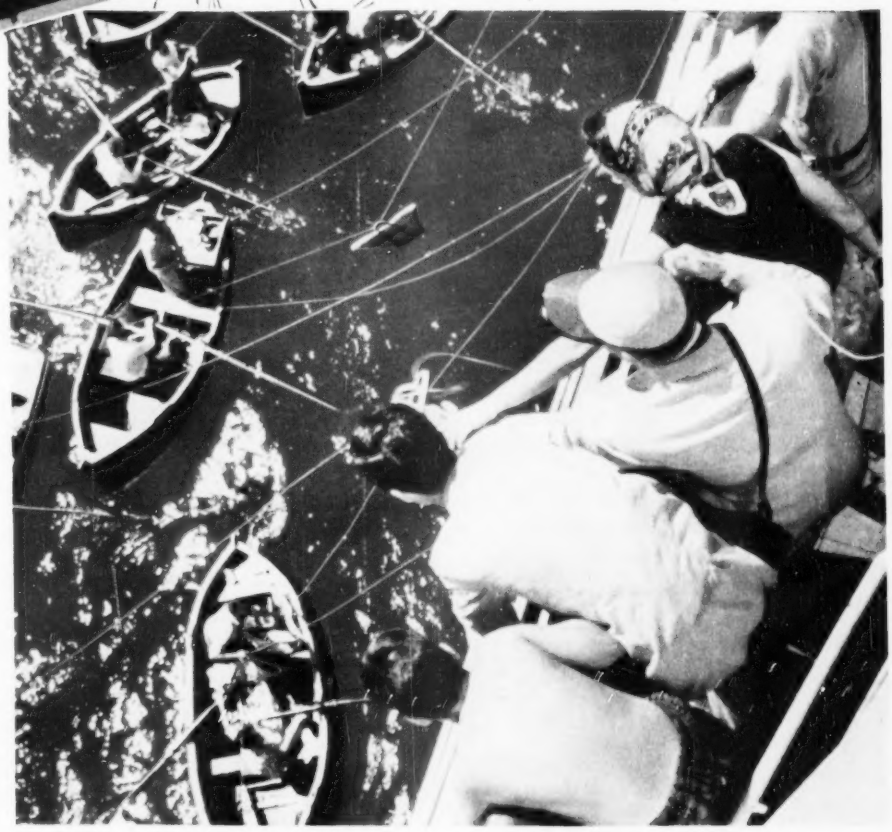
This is another letter concerning the press photographer's duty to record on film any event he witnesses. Here is my own experience: My husband and I were driving on the turnpike over the Labor Day week-end, and met up with a terrible bus smash-up just after it had occurred. We as amateur photographers had just been dreaming of the possibility of selling a picture to the press, never thinking that a tragedy might have to occur to make it possible. Neither of us felt much like taking pictures, but we did. One man said, "Don't take pictures and annoy the people." I replied, "I'm not going to annoy them; I'm going to help them by making photographic evidence they might need some day." Later on, that same man

Take it easy

WITH

STEREO-REALIST





A WINNER!
"BUM-BOATS IN GIBRALTOR" by Ronald Colman, vice-president of Hollywood Stereoscopic Society. First prize award in "Scenic" classification of Society's 1952 competition.

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PERMAMOUNTS — Specially designed for protection *and* viewing; 3 window sizes and spacing pre-adjusts slide and eliminates need for projector adjustments. Sturdy plastic-glass combination is resistant to breakage. Easy to assemble.

PERMAMOUNT MOUNTING KIT — Consists of three major items needed for mounting Permamounts: clear plastic sorting tray, accurate film cutter, and tweezers. Compactly packaged in sturdy box for convenient storage.

REALIST SILVRSCREEN — Specially designed and engineered for stereo projection. Picture surface is absolutely *flat* because it is *elastic*. Built-in tilt control; light, collapsible frame. Screen sizes now available: 40" x 40" table model (shown) and 54" x 59" floor model with adjustable stand.

THERE'S nothing like Stereo-REALIST slides for true-to-life realism. Take movie-star Ronald Colman's prize-winner, for example. The printed reproduction above cannot begin to do justice to the sparkling color, and breath-taking depth of the original REALIST slide when viewed in a REALIST viewer. Every unit is in its *true* perspective. It's so amazingly life-like you can almost feel the wind in your hair and the sun on your face.

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If you haven't seen REALIST pictures you're in for a thrill. Ask your camera dealer to show you some. Inspect the many superlative features of this camera with an established reputation for outstanding results. You'll quickly agree that you, too, can "take it easy" with the REALIST. DAVID WHITE COMPANY, 363 West Court Street, Milwaukee 12, Wisconsin.

STEREO Realist

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ShowPak "300"

Built into its own metal case. The ShowPak "300" is an ultra-portable, ultra-modern 300-watt blower-cooled projector with 5" coated *anastigmat* lens. Has built-in slide file and easy micro-tilt. It's typical TDC quality throughout. Take it right with you—anywhere!

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The choice for exceptionally brilliant illumination. Coated 5" f/3.5 *anastigmat* lens. Venturi-type blower cooling. With SELECTRON Semi-matic changer. $84.50*

TDC Streamliner "300" Duo. Projects 2" x 2" and 2¼" x 2¼" (in 2¾" x 2¾" mounts) slides. With 5" f/3.5 coated anastigmat lens, 2¼" x 2¼" changer, $69.50*

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Please rush me a FREE copy of your new booklet on slide photography and projection.

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City ..... Zone ..... State .....

thanked me for what I had done. I had been home from my trip only one day when I got letters from four of the accident victims, asking for prints of the pictures and offering to pay for them. The press bought three pictures, and the victims got them for nothing. So, for about 20 minutes, I had been a member of the "working press," and now I know how press photographers must feel. There isn't anything in their minds but duty, or they would very likely be heading the other way whenever they encountered tragedy. *Someone* has to think and act coolly while victims are dazed and shocked by events!

Mrs. Clarence May
Chicago, Ill.

Success Story

Your story on Gjon Mili in the January issue was very enlightening. Now I know how to be a good photographer: hire a press agent and a good assistant. According to the article, a good photographer can't be bothered with such trivial things as loading the camera, cocking the shutter, or doing any darkroom work. Nope, all he has to do is just press the shutter release. And, after getting one good shot, just go home and leave the rest up to the assistant. Some fun, eh? Long live photographers' assistants!

Harry B. Marlin
Brownwood, Texas

Anti-Vivisection

Since your printing of bullfight pictures in the June issue, I ceased buying your magazine; to see you indirectly sanction such savagery offended my morality so much that I decided my money would never be used to support PHOTOGRAPHY. Now my attention has been drawn to another violation of decency in the October issue, pages 36 and 37, showing a high-school student photographing the dissection of a frog, and showing four pictures of the process! What is your magazine coming to? You know full well that the average amateur photographer is a great imitator, so now every high-school student, and others, will be taking photos of animals in the stages of dissection. Frogs being hard to acquire, young kittens and puppies will probably be their victims! Don't blame teen-agers for violent crimes when our schools become the instigators of brutality. I have always enjoyed using my two cameras, but now I just don't feel like loading them up, for those perfectly horrible pictures keep rising up before me each time I click the shutter. . . .

Louis W. Kraus
Yonkers, N. Y.

I am writing to express my disgust and resentment that a publication of your standing would publish and illustrate an article on the dissection of a frog that looks alive—an example of cruelty very bad for impressionable young people.

Cornelia C. Brown
Second Vice President,
Central Westchester
Humane Society
Bronxville, N. Y.

"Everybody thrills to 'The Greatest Slide Show on Earth'"

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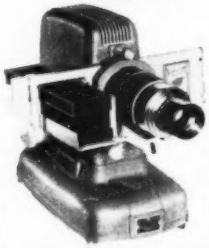
Three dimension projection! Twin 5" f/3.5 *anastigmat* lenses focus simultaneously. Two 500-watt lamps. Accepts all 35mm. stereo slides and two-dimensional 2" x 2" slides. $175*



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With case and Nikkor Ctd. f/2.0 lens **$259. Cash or $25.90 Down;** or with Nikkor Ctd. f/1.4 lens **$349. Cash or $34.90 Down.** List of top-notch Nikkor lenses for Leica and Contax free on request!

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1953 Model with I.S.A. speeds and Elmar Ctd. f/3.5 lens **$278.80 Cash or $27.88 Down;** with Summitar Ctd. f/2.0 lens **$384.20 Cash or $38.42 Down;** or with Summarit Ctd. f/1.5 lens **$435.20 Cash or $43.52 Down.**

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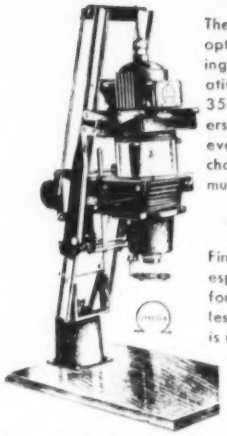

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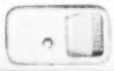
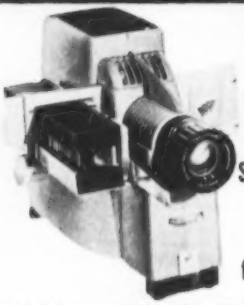


G I ORDERS GET THE GREEN LIGHT AT WESTEN'S



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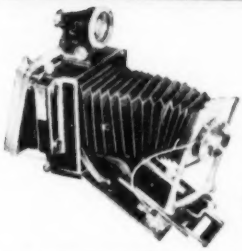

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BRUCE DOWNES'

point of view

IN PHOTOGRAPHY as in anything else you can't eat your cake and have it too. Making a picture is always a case of choosing among innumerable possibilities, and the decision, more often than not, is made on sheer expediency. Even so basic a question as to whether existing or artificially introduced light is best in a given situation is not as simple to answer as it might seem. Only individual photographers in particular circumstances can answer that question. It is easy, for instance, to leap to the conclusion that existing light produces the most natural pictures. But the fact is photographers using artificially contrived lighting often produce very realistic pictures.

These questions were prompted by the two pictures reproduced on pages 45 and 62, which represent two solutions to the problem of shooting pictures in a night club. One was made in Paris with speedlights by Carl Perutz, the other with existing light in New York by Bob Schwalberg. Both are good pictures. One is critically sharp, the other is soft; one is practically grainless, the other is quite grainy. Who is to say which is the better picture?

The thing that makes this an interesting and significant discussion is, of course, a developer like SD-19a (see page 40), which brings a picture like Schwalberg's within reach of most cameras and which invalidates the old plaint that you can't make pictures like that without at least an *f*/2 lens.

In bringing such subjects within reach of most cameras, SD-19a of course does not accomplish its mission without introducing perceptible grain to the negative.

But is graininess so bad? In the past several years fewer and fewer photographers and editors have come to think so. Is the loss of fine grain worth the gain in effective speed? Take a look at those pictures again and put the question the other way 'round: Is the gain of fine grain and critical sharpness worth the energy it took to carry and set up the speedlight equipment?

Before arriving at your own answer it is interesting to keep in mind that both Schwalberg with natural light and SD-19a, and Perutz with a battery of speedlights, are striving to produce spontaneous, realistic pictures. In doing so each makes at least one sacrifice. Schwalberg sacrifices fine grain and needle sharpness for what he considers to be maximum fidelity to the atmosphere and truth of what went on in the smoky night club. Perutz, on the other hand, sacrifices the freedom of movement enjoyed by Schwalberg, and perhaps some of the show's true atmosphere. What he gains are a certain charm and convincing validity in the minute detail which a fine lens is capable of revealing. Add to the lens' capabilities the help of speedlights and you have sharpness throughout the field extended to motion, which can be stopped in the thousandth part of a second. And when the speedlights are placed with the skill of a photographer like Perutz you have a dramatic, atmospheric effect even if it is not the way the show looked.

All this really resolves itself to a choice of weapons in the continuing struggle to overcome photography's inherent limitations. If the limitations did not exist there would be need for neither speedlights, flashbulbs nor high speed developers. Each weapon, of course, carries with it its own burdens or defects.

This struggle to achieve greater realism and spontaneity in photographs has led during the last few years to a greater tolerance for poor technique, i.e., graininess, lack of sharpness, tonal mergers, and so on. Speedlights and flash can overcome these faults but not without introducing faults of their own. With lighting equipment the stage has to be set so to speak and the area of operation restricted, and with speedlights some critics object to the frozen, statue-like look of people impaled at the peak of an electronic flash.

Photography, of course, is so fascinating because it is so full of paradoxes. You just can't pin it down to rules at any point. The natural light people with all their freedom of movement which allows them to get right inside a situation as it actually is are after all probably not the realists they think they are. They may be some day, but today the grain and the blur destroy the intended realism to produce pictures that are perhaps best described as impressionistic. The existing light with its resultant wide-open lens (although developers like SD-19a are permitting the diaphragm to be closed down somewhat) tend to deepen the gloom, and although the sense of life being lived, and usually suffered, is unmistakably there, the whole experience is transformed into pictures that, with the grain and all, are almost as far removed from realism as the pointillism of Seurat, the French impressionistic painter.

Photographs made skilfully by contrived lighting on the other hand are often extremely realistic in detail and atmosphere even though the lighting equipment may have banished the sense of life from the faces and the manner of the people in them.

All of which is a round about way of saying that photography is a perpetual compromise between what one wants to do and the limitations of both the medium and one's self. But this is true of all the arts. After all it's pretty tough to express a poetic idea in the fourteen-line sonnet form, too.—

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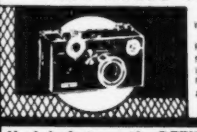

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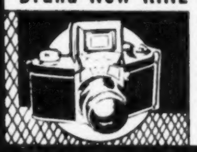

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POLAROID LAND CAMERA	89.75	59.50	50.00

PRESS CAMERAS

	New	Used	Trade-in
ANN. GRAPHIC 23 f4.5 rfdr, 3 cfh, fpa		$ 99.00	$ 75.00
ANNIVERSARY GRAPHIC 4x5 4.5 ctd rfdr, flash 3 cfh, fpa		149.00	110.00
PACEMAKER CROWN GRAPHIC 2¼x3¼, f4.5 ctd. rfdr, flash cfh	$239.85	155.00	120.00
PACEMAKER SPEED GRAPHIC equipped as above: 2¼x3¼	279.50	169.00	130.00
CENTURY GRAPHIC 2¼x3¼, f4.5 ctd.	108.00	69.50	55.00

8mm CAMERAS

	New	Used	Trade-in
REVERE 88, f2.5	$ 72.50	$ 39.50	$ 30.00
REVERE 61, Mag. f2.5	112.50	64.50	52.00
REVERE B63, Mag. Turret f2.8	142.50	75.00	65.00
KODAK BROWNIE f2.7 ctd	43.30	29.50	22.00
KODAK MAGAZINE f1.9 ctd	150.95	98.00	80.00
B&H SPORTSTER f2.5 ctd	89.95	56.00	44.00
B&H TRI LENS 8 f1.9 ctd	134.50	83.00	70.00
B&H AUTO-8 Mag f2.5 ctd	134.95	85.00	70.00
B&H Auto 8 Mag Turret f1.9 ctd	199.95	134.00	100.00
BOLEX L 8 f2.8	97.00	52.00	42.00
BOLEX H 8 LEADER, f1.9 ctd Lytar	291.50	184.00	145.00

16mm CAMERAS

	New	Used	Trade-in
KODAK ROYAL, Mag f1.9 ctd	$176.25	$122.00	$ 90.00
BOLEX H-16 LEADER f1.9 ctd	299.00	199.00	150.00
B&H AUTOLOAD 200, f1.9	214.95	135.00	110.00
B&H 70 DL TURRET f1.9 ctd	369.95	249.00	200.00
PATHE SUPER 16 TURRET	450.00	325.00	215.00

8mm & 16mm PROJECTORS

	New	Used	Trade-in
REVERE 85 DL cc	$124.50	$ 64.00	$ 50.00
KEYSTONE K68 750 watt	114.50	61.00	50.00
KEYSTONE K109 750 watt cc	159.50	99.00	80.00
De JUR 750	149.50	87.00	65.00
BELL & HOWELL REGENT	169.95	109.00	85.00
KEYSTONE A82 750 watt	119.50	79.50	60.00
REVERE 48, 750 W	160.00	99.00	80.00
BELL & HOWELL DIPLOMAT	281.95	169.00	130.00
REVERE SOUND PROJ.	325.00	209.00	150.00
BELL & HOWELL 285C SOUND PROJ.	449.95	295.00	225.00

SLIDE PROJECTORS

	New	Used	Trade-in
ARGUS PBB 200W Blower case	$ 49.50	$ 33.00	$ 24.00
GOLDE MASTER 500W	76.65	49.50	30.00
GOLDE CORONET 200W blower	49.95	35.00	25.00
TDC MAINLINER, 300W blower	58.50	38.50	25.00
TDC STEREO 2-500W Lamps	175.00	115.00	80.00
TDC STREAMLINER 300 Duo	69.50	43.00	35.00
TDC SHOW PAK Blower 300W	54.50		27.50
SVE SKYLINE 300W Blower	52.45	30.00	22.00
KODASLIDE MERIT	26.10	18.50	12.00
LA BELLE No. 500 Watt	95.00	59.00	43.00

LEICA CONTAX KINE ACCESSORIES

FOR LEICA	New	Used	Trade-in
35mm f3.5 Summaron	$122.40	$ 72.00	$ 63.00
50mm f3.5 ctd Elmar	68.00	45.00	35.00
50mm f1.5 ctd Summarit	272.00	160.00	130.00
85mm f1.5 ctd Summarex	442.00	274.00	200.00
90mm f4 ctd Elmar Chrome	132.60	74.50	63.00
135mm f4.5 ctd Hektor		88.00	70.00
135mm f4.5 ctd Hektor Chrome	165.00	119.50	90.00
FOR CONTAX	**New**	**Used**	**Trade-in**
35mm f2.8 ctd Biogan	$245.00	$ 96.00	$ 70.00
85mm f2 ctd Sonnar	292.00	119.00	90.00
135mm f4 ctd Sonnar	170.00	99.00	75.00
FOR KINE EXACTA	**New**	**Used**	**Trade-in**
35mm f2.5 Retrofocus W.A.	$ 99.50	$ 63.00	$ 40.00
135mm f4 ctd Triotar	75.00	54.00	35.00
180mm f5.5 ctd Tele Xenar	83.50	58.00	40.00
PENTA PRISM for V & VX w case	53.00	36.00	27.00

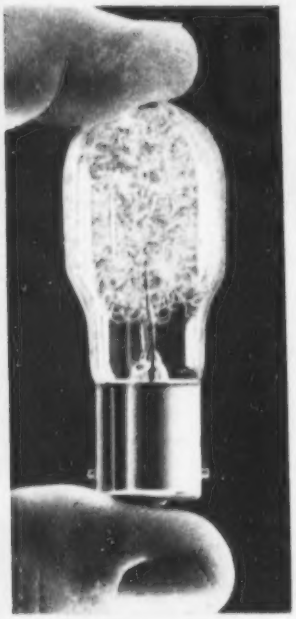
Prompt Free appraisal and Quotation will be gladly rushed to you by return mail. Mail Orders promptly filled. Paid or C.O.D., FOB New York. Note: On C.O.D. kindly include 10% Deposit on Order. Include Postage. Prices subject to change.

LU — 2-1416

MINIFILM CAMERA CORPORATION

1190 AVENUE OF AMERICAS, N. Y. C., BET. 46th and 47th St.

GREATEST FLASHBULB NEWS IN YEARS!



Actual size:
Overall height 2 5/8"
Maximum diameter 15/16"

IT'S TINY! IT'S TERRIFIC!

IT'S SYLVANIA'S AMAZING NEW *Bantam 8 Flashbulb*

Tiniest Blue Dot Flashbulb Made!

Sylvania's Bantam 8 is the most revolutionary flashbulb development in years. Faster lenses and films have created new lighting problems. Sylvania developed the answer—BANTAM 8—with the same high quality and sure-fire dependability for which all Sylvania Blue Dot flashbulbs are famous. Useful with *any* camera, it opens up new picture possibilities for users of fixed-speed cameras.

COSTS LESS!

Only 12½¢ per bulb*, Bantam 8 saves you big money. Enables you to experiment with new lighting effects.

Takes Better Pictures!

Bantam 8's perfect light center and smaller light source increase efficiency of midget reflectors . . . assure correct light for every shot.

EASIER TO BUY!

E-Z Split Pack lets you buy 12 or 8 or 4 flashbulbs, as many as you need, in individual cartons.

Produces Big Light!

7000 lumen-seconds light output means only one f stop difference between Bantam 8 and Press 25, under average conditions.

Perfect for Close-Ups!

Bantam 8 is easier on subject's eyes . . . doesn't burn out negatives. Saves printing time, effort, expense.

EASIER TO CARRY!

Compact 12-bulb carton fits pocket. Perforated so you can tear off and discard portions of sleeve as you use bulbs.

PROVEN DEPENDABILITY!

Bantam 8 has Quick-Flash filament and sure-fire dependability you know you can count on with all Blue Dot Bulbs.

*Suggested retail price

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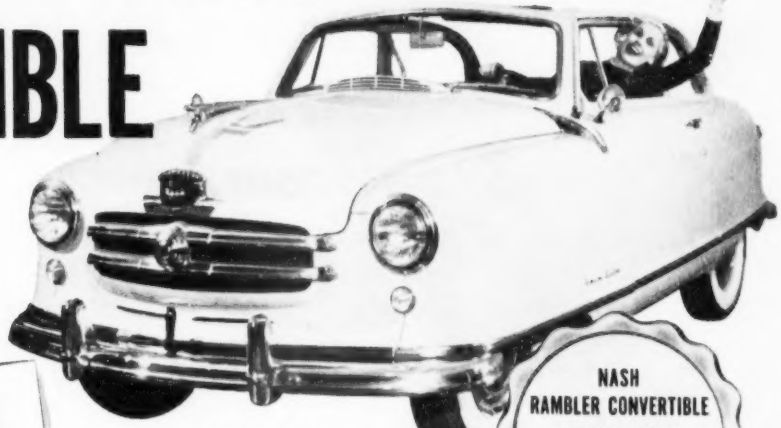
Sylvania Electric Products Inc., 1740 Broadway, New York 19, N. Y.

Projection Lamps
Darkroom Lamps
Superflood Lamps
Super-N-Larger Lamps

PHOTOLAMPS; LIGHT BULBS; RADIO TUBES; TELEVISION PICTURE TUBES; ELECTRONIC PRODUCTS; ELECTRONIC TEST EQUIPMENT; FLUORESCENT TUBES, FIXTURES, SIGN TUBING, WIRING DEVICES; TELEVISION SETS

WIN A NASH RAMBLER CONVERTIBLE

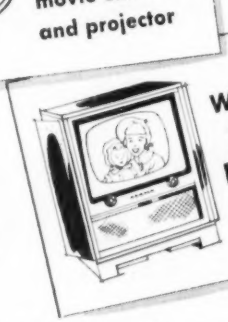


in Sylvania's Exciting "FOLKS ARE FUN" Flash Photo Contest

Win a BELL & HOWELL movie camera and projector

NASH RAMBLER CONVERTIBLE GRAND PRIZE
Open to both Junior and Senior Class Contestants

CONTEST CLOSES
MIDNIGHT APRIL 30, 1953
Competition limited to non-professionals.



Win a 21" Sylvania MONTCLAIR TV SET

IT'S 2 CONTESTS IN 1!

101 SPECIAL AWARDS *for grown-ups and youngsters!*

JUNIOR GROUP (under 18 yrs. of age)		SENIOR GROUP (18 years old and up)
21" Sylvania Montclair TV Set	1st prize	21" Sylvania Montclair TV Set
Bell & Howell Movie camera, projector	2nd prize	Bell & Howell Movie camera, projector
$200 Savings Bond	3rd prize	Quiet-Kool Air Conditioner
DeLuxe V-M Record Player	4th prize	Regina Electric Floor Polisher & Electrikbroom
Streamlined Roadmaster Bicycle	5th prize	Waring Blendor & Travel Iron
Sylvania Clock Radio	6th prize	Waring Mixor & Steam Iron
Case Sylvania "Blue Dot" flashbulbs, any type	prizes 7 thru 15	Case Sylvania "Blue Dot" flashbulbs, any type
$10 check, good for any photo purchase at dealer's named on entry blank	prizes 16 thru 30	$10 check, good for any photo purchase at dealer's named on entry blank
$5 check, good for any photo purchase at dealer's named on entry blank	prizes 31 thru 50	$5 check, good for any photo purchase at dealer's named on entry blank

It's easy, it's fun—to enter Sylvania's Blue Dot Flashbulb contest.

Come one! Come all! Prizes galore! Fun for everyone—in Sylvania's "Folks Are Fun" Contest.

Here's all you do. Take a flash picture . . . any snapshot (2¼" x 2¼" or larger) will do—expressing the idea "Folks Are Fun." You'll find your opportunity at parties, dances, sports events . . . anywhere, any time. Whenever you hear a chuckle or a laugh, there's a chance for a shot showing "Folks Are Fun."

Use any Sylvania Blue Dot Bulb!

You must take your picture with a Sylvania Blue Dot bulb, any size. Each entry must be accompanied by a completed entry form and the flashbulb number cut out of the front panel of sleeve of Sylvania Flashbulbs. Free entry forms and contest rules are available at your Sylvania dealer's. Hurry! Hurry! Enter fast and often. You can win the prize of a lifetime!

SYLVANIA

Sylvania Electric Products Inc., 1740 Broadway, N. Y. 19, N. Y.

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SALON QUALITY

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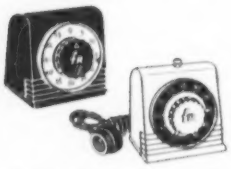
Darkroom Accessories

And here's why. Like any craftsman, a photographer's skill can be helped or hampered by his equipment. That's why FR has designed each and every one of its darkroom accessories to meet the most exacting demands. Each and every one is guaranteed to perform as promised. Each and every one is guaranteed to give the most value for the least cost. Each and every one carries the FR money-back guarantee—the assurance that you must be satisfied. Write for your free folder on FR Developing Tanks.

THE FR CORPORATION • 951 BROOK AVENUE • NEW YORK 56, N. Y.

FR Cut-Film-Pack Tank. Adjustable for all cut film or film packs up to 4" x 5" or 10 x 12.5 cm. Patented loading guide facilitates easy loading in total darkness. Resistant to all chemical reaction. **$9.00.**

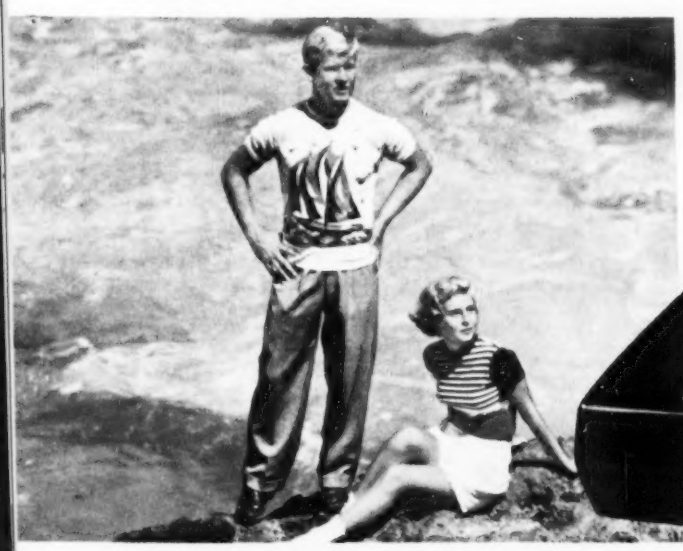


FR Interval Timer $7.50
FR Automatic Exposure Timer $9.50. Either may be "pre-set" once for repeating same interval. For developing—the FR Interval Timer, For printing and enlarging—the FR Automatic Exposure Timer.

FR Thermometer. Fits into any tank – or clips onto tray. Expanded range from 50° to 90°. Easier to read divisions of 1°. Has stainless steel protective sheath. Extremely accurate. **$1.65**

FR "SPECIAL" ROLL FILM DEVELOPING TANK Adjustable to any size roll film from 35 mm to #616 . . . needs only 8 to 16 ounces of solution . . . easy to load from outside and inside (inside loading even when wet) . . . molded from tough, sturdy plastics impervious to chemicals. Translucent flanges permit color film development. Guarantee slip with every tank. Complete with practice film. **$3.40**

"So lifelike you feel you're right there with 3 dimension pictures!"



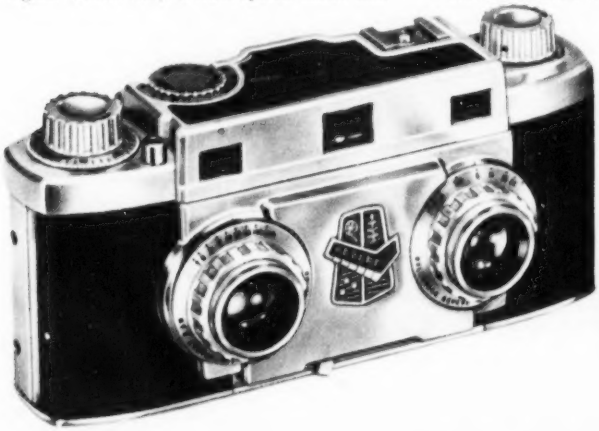
The sensational Revere 3 Dimension Camera enables you to take amazingly lifelike pictures as easy as pie! Just press the button as you do with any ordinary camera. What you see, you catch in thrilling three dimensions. Everything has shape, form, depth! Full color scenes seem to spring to life with breath-taking 3 dimensional realism. So truly lifelike, viewers exclaim it's like being right there!

See the two lenses? They're perfectly matched and act like your eyes. Simply press the button and they take two separate views of each scene. When viewed, they blend into 3 dimensions. Inexpensive, too! Get 29 stereos from regular 35mm. roll; 20 from special stereo film.

Even beginners get fine results from their first roll, so simple is Revere to operate! Guesswork is eliminated. Even focusing for distance is automatic with the built-in range finder. Too, stereos are now mounted by your film processor and are returned to you ready to show!

Every picture a thrill! Sheer enjoyment when you view stereos through the new Revere Viewer. Advance design brings out the best in every shot. Ask your dealer to show you the new Revere Stereo Camera and Viewer.

REVERE CAMERA COMPANY, CHICAGO 16, ILLINOIS



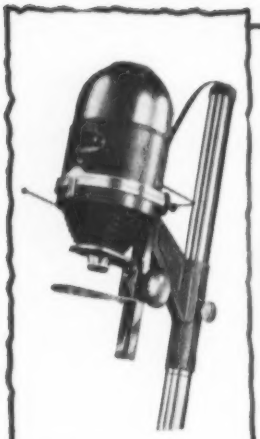
For a new adventure in photography . . .

Revere 33

STEREO CAMERA

CAMERA — 2 matched, coated 35mm f/3.5 REVERE WOLLENSAK AMATON lenses with REVERE WOLLENSAK RAPAX shutters, speeds 1/5 to 1/200; coupled focusing; internal synchro flash; superimposed image range finder and viewer in camera head; double exposure preventive; single frame provision; level gauge. Inc. fed. tax **$174.50**

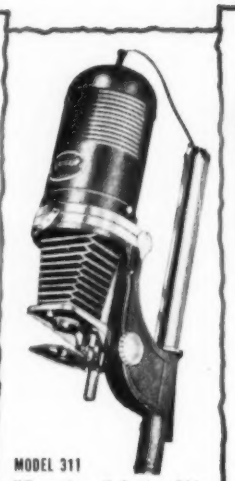
VIEWER — fine achromatic lenses; both focusing and interocular adjustments; built-in light; 3 color plastic case. **$18.50**



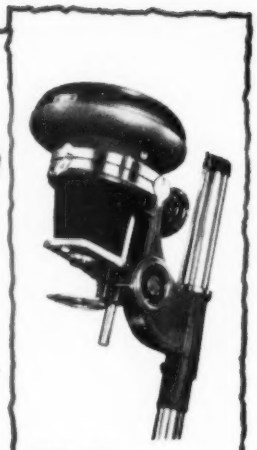
MODEL 135
"Store-Away" Miniature for 35mm and Bantam. Condenser 51mm. F4.5 lens.

MODELS 269 and 279
"Store-Away" Junior. 2¼x 3¼. #269 diffusion. #279 condenser. F6.3 lens.

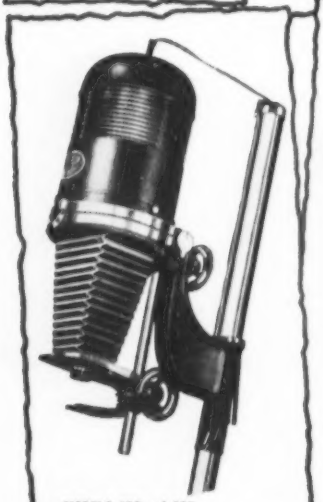
MODEL 269 CL
"Store-Away" Cold-Lite Junior. 2¼x3¼. Cold-lite illumination. F6.3 lens.



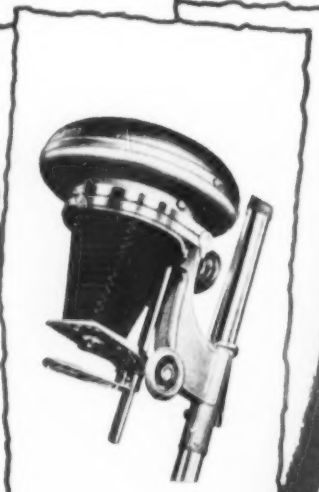
MODEL 311
"Store-Away" Senior. 2¼x 3¼. Condenser system. F4.5 lens. 36" post.



MODEL 315 CL
2¼x3¼. Cold-lite illumination. F4.5 lens.



MODELS 450 and 470
4x5. Diffusion and condenser illumination. 5½" F4.5 lens.



MODEL 450 CL
4x5. Cold-lite illumination. 5½" F4.5 lens.

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Every Federal offers more for your dollar than any other enlarger on the market. In rigidity, precision, versatility, convenience, and simplicity of operation, Federal Enlargers are, and always have been, unrivalled. The perfection of photographic quality in the prints they produce is so far beyond criticism that Federals are the equals of enlargers costing *many* dollars more. The price for each Federal Enlarger is for the complete unit, including its fine anastigmat enlarging lens, ready to turn out perfect prints the very day you buy it. And behind the purchase stands the integrity, responsibility, and high reputation of a leading manufacturer of fine photographic and electronic instruments.

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Photographic and Electronic Instruments

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Top flight Shots with UTMOST EASE

An outstanding characteristic of all Zeiss Ikon cameras is the ease and certainty with which they can be operated. That means a lot—particularly when you have to shoot fast.

Examine a Zeiss Ikon camera at your dealer's. See how well balanced it is when held in "taking" position—how easily your fingers can reach every control . . . how fast and accurately these controls can be manipulated. And you know, of course, that a Zeiss Ikon has superb optical qualities—so important in getting fine prints—prints that reveal lifelike detail and subtle tone values.

Zeiss Ikon cameras are available in outstanding auto-focusing models like the Super Ikonta A, B and C, which make album size prints . . . smart 35 mm models like the Contax II-a and III-a, the Contessa 35, Ikonta 35 and Contina 35 . . . the popular Ikoflex 2¼ x 2¼" reflex . . . and the economically priced Ikonta and Nettar models.

At authorized Zeiss Ikon dealers. *Literature on request.*

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IKONTA models popularly priced, take pictures 1⅝ x 2¼", 2¼x2¼" & 2¼x3¼".

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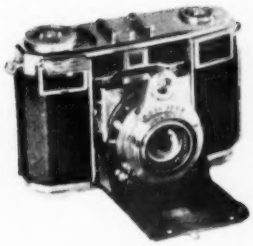
SUPER IKONTA B
A superb 2¼x2¼" auto-focusing range-finder camera.

CONTAX II-a
Interchangeable Zeiss Opton lenses. Contax III-a has built-in exposure meter.



CONTESSA 35
Has a built-in auto-focusing range-finder and an ASA exposure meter.

IKOFLEX
An outstanding 2¼ x2¼" reflex with **EXTRABRITE** focusing screen.

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FREESTYLE Gives You FILM and PAPER For PENNIES!

Original Factory Packed **KODACHROME** Free Kodak Processing

8mm- Daylight and Indoor ..... Roll $3.25
(Shp. wgt.—6 oz. each) 1953 Dating Mag. 4.00
16mmx100'-Daylight, Nov. 1951 Dating 7.95
(Shp. wgt.—1 lb. each) Indoor, Dec. 1951 Dating 7.50

16mmx100' Ansco Color, Indoor, FREE Ansco Processing, 1950 Date . . $6.75—3 rolls $19.50
(Shp. wgt.—1 lb. each 3 rolls—2 lbs.)

5 x 7 FRESH FILM—1953 DATING
5x7 Ansco Triple S Pan Cut Film . . . . . 2 doz. $3.00
(Shp. wgts.—2 doz.—2 lbs. 6 doz.—4 lbs.) 6 doz. $8.75
5 x 7 Du Pont Hi Speed Type 428 Cut Film-Box of 100 sheets $12.00—2 boxes $23.00
(Shp. wgt.—3 lbs. per box)

★★★ LOWEST PRICES ANYWHERE ★★★

DAYLIGHT 35MM **ANSCO COLOR** 27½ for $5.50
DATED FULL YEAR AHEAD. Load your own cartridges at SENSATIONAL SAVINGS! 27½' make 9-20 Exp. Carts. or 5-36 Exp. Carts. 50' for $8.95
(Shp. wgt. 27½'—8 oz. 50'—1 lb.)

ROLL FILM 620-127 116-616
Medium Speed. Fully Panchromatic. 50 Day. —32 Tung. Fine Grain. Manufactured by Kodak. *Fully equivalent to Plus X in speed and fine grain.* TREMENDOUS VALUE.! ! ! Guaranteed. 10 rolls-$1.69, 20 rolls-$2.98, 40 rolls-$5.49.
(Shipping weight—10 rolls 1 pound)

Fresh 35mm Film — Here's A Real Value!
E.K. PLUS X—100' roll, SAFETY, 1953 Date $2.95
E.K. SUPER XX—100' roll, SAFETY, 1953 Date . . . $3.25
E.K. FINE GRAIN POSITIVE—100' roll, Safety, 1953 Date . $1.75 per roll—3 rolls $5.00
E.K. BACKGROUND X—100' roll $2.50
E.K. PLUS X, SUPER XX 35mmx36 exp. cart. 12—$3.95
E.K. PLUS X 35mmx20exp. cartridges . . . 12 for $2.50
DuPONT 2—100' roll . . . . $1.75—3 rolls $5.00
DuPONT 2—36 Exp. Cart. . . . 12 for $2.75, 24—$5.00
(Shp. wgts.—100'—1 lb. 12 cart.—2 lbs. 24 cart.—3 lbs.)

! ! Money Saving Opportunity ! !
BRAND NEW 35MM BULK FILM LOADER
Load your own 35mm film for pennies . . . and save dollars! $5.50 plus 12 empty E.K. carts. FREE
Reg. retail price $8.15 (Shp. wgt.—2 lbs.)

!!JUST REDUCED!!
4x5 Ansco Isopan, Kodak Panatomic X, and Kodak Infra-Red . . 2 doz. $1.59, 6 doz. $4.50
EXCELLENT QUALITY, 1950 Date
MIXED SELECTION PERMITTED
(Shp. wgts. 2 doz.—1 lb. 6 doz.—3 lbs.)

Roll Film - Ansco Supreme, No. 620, Factory Packed, 1950 Dating. Guaranteed Perfect! 12 rolls for $3.19
(Shp. wgt. 12 rolls—1 lb.)

TERRIFIC 16mm FILM VALUE
16mm x 100' KODAK SUPER X MOVIE FILM . . . FREE PROCESSING INCLUDED $2.98 each
(Shp. wgt.—1 lb. ea. 4—2 lbs.) 4 for $10.95

DRASTIC REDUCTION!!!
4x5 Eastman Kodak Super XX Film Pack
$1.19 ea. 5 for $5.00
4x5 Kodak Ortho X, Super XX, Cut Film
2 doz. $1.25 8 doz. $4.50
(Shipping weights 2 doz.—1 lb. 8 doz.—3 lbs.)

Tremendous Savings In Enlarging Paper!
Defender Velour Black 11 x 14, B Surface, White Semi-Matte D.W., Contrast 4, 1950 Date
(Shp. wgt.—5 lbs. per pack.) 50 sheet package . . $4.25

CONTACT PAPER—CLOSE OUT!
AZO, ANSCO, HALOID 4x5 SW Glossy Contact Paper ORIG. FACTORY PACK. Guar. (Shp. wgt.—1 lb. per gross)
F1 and 3 $.98 gross 3 gr.—$2.75 6 gr.—$4.95

IMPORTANT 16mm VALUE
16mm x 50' Kodak Super X and Ansco Hypan, Reversal Film. Factory packed can of 28rolls-$11.95 2 cans-$22.50 3 cans-$32.00
For Limited Time Only! 12 rolls — $5.75
(Shp. wgts.—12 rolls 2 lbs. 1 can 5 lbs.)
Empty Magazines 59¢ each . . 12 for $6.00. With any purchase of 16mm film — 12 empty mag. $5.00
(Shp. wgts.—1 lb. ea. 12-7 lbs.) 24 empty mag. $9.00

BRAND NEW 16mm x 50' SUPER X MAGAZINES. LOADED BY EASTMAN KODAK. PRICE INCLUDES FREE PROCESSING AND FAST, FREE RETURN SERVICE (Shp. wgt.—1 lb. ea.) New Low Price! $2.39 ea. 2 for $4.50

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tools and techniques

by Norman C. Lipton

A round-up of recent developments and significant trends

Foreign color films of any make and type are now being processed by the General Photographic Supply Co., 136 Charles Street, Boston 14, Mass. The cost per roll of Dufaycolor is $1.50 and for all other materials whether direct-positive or negative-positive, $3.50 per roll. A wide variety of British, Italian, and Japanese materials are specifically listed in the company's prospectus. In addition to film processing, the schedule lists positive-to-positive printing in sizes from 2¼x3¼ to 8x10 inches and print making from any negative color process in sizes ranging from 2¼x3¼ to 12x16 inches. It is necessary to write for the complete price list before submitting orders for all work must be accompanied by payment for the complete job plus return postage.

Realistic Movies. The motion-picture industry has found realism to be an effective weapon in its struggle to survive the inroads of home television. Year after year the major studios keep stepping up the proportion of color releases in their total schedules. Recent excursions into three-dimensional color like *Bwana Devil* (PHOTOGRAPHY, December 1952) and the wholly successful attempt of Cinerama (PHOTOGRAPHY, November 1952) to reconstruct the illusion of reality by putting the projected image "around" the spectator (peripheral vision) are a logical extension of this trend. And the search continues. Cinerama's producers assure us that the disconcerting jiggling between the adjacent panels of the broad projected image has already been overcome. Yet, Cinerama can't possibly be Hollywood's answer to TV. The process calls for the partial reconstruction of the theater to accommodate the special screen, projection booths and sound gear, and you can't get a really satisfying illusion of reality unless you are seated fairly close to the center of the house. The suitability of the medium for other than broad scale productions and spectacles is questionable.

As for true stereo movies, all of the systems now in use call for special projection equipment or adaptations which theater owners are reluctant to install on a nationwide basis. The left and right-eye images must be screened from twin reels loaded in adjoining projectors with a fixed interocular whose operation has been rigidly synchronized. Loss of a frame in editing either of the reels can cause havoc on the screen. We were privileged to see an extremely effective three-dimensional color film on a scientific subject at the New York convention of the Biological Photographic Association last year, produced by the Worcester (Mass.) Film Corporation. The photography had been accomplished with twin synchronized cameras with a variable interocular adjustment, like the setup employed in filming *Bwana Devil*. The pair of 16-mm reels were screened with a mechanically coupled double projector of unique design. We found the presentation flawless and the 20-minute viewing experience completely satisfying even though Polaroid spectacles had to be worn. Second hand reports from the *Bwana Devil* premiere in Hollywood were far less favorable.

It should be possible for Hollywood to produce and exhibit on a national basis three dimensional color movies as effective as the Worcester company's product with a little concentration on known products and techniques. For example, there is the Land-Mahler vectography system brought out by Polaroid in 1940. Here, the paired left and right-eye views are printed on oppositely polarized surfaces of a single film strip which can be run through any ordinary theater projection. The scrambled screen image is integrated in three dimensions by means of properly oriented polarizing spectacles worn by the audience. Although straight vectography with dye-color images has a tendency to produce ghost images because of the depolarizing effect of the dyes, improved color vectographs have been worked out in which full color saturation and complete separation of the two images of the stereoscopic pair have been obtained. This process can solve the problems of duping, editing, projection equipment, and image synchronization in one swoop. Only the matter of adequate screen illumination remains.

New Flashbulb Line. The Philips PF3, an expendable photoflash lamp that is so small that a package of 12 is but slightly larger than a cigarette pack recently made its debut here under the auspices of the Amplex Corp. of Brooklyn, N. Y. Listing at 11 cents per lamp, the new sub-midget which was developed in Eindhoven, Holland, carries the trade name Amplex-Norelco "My-T-Myte." A total of 6,000 lumen-seconds is emitted by the PF3 lamp while a slightly larger companion My-T-Myte the PF4, emits 11,000 lumen-seconds and costs 12½ cents per lamp. Both lamps fit existing single-contact bayonet sockets and peak at 20 milliseconds (Class M synchronization). Their average effective color temperature is 3800 K. The metal filler enclosed in the two lamps is hydronalium wire, an exclusive Philips development, rather than the shredded aluminum foil used in domestic flashbulbs. Principal application of these lamps is in the fixed-focus flash camera field. Synchronization up to 1/100 second is practical with photoflash "A" batteries or a B-C power supply. (The new flashbulbs are not to be confused with the Sylvania Bantam-8, a compact slimmed-down version of the Sylvania Press 25 introduced about a month earlier—see last month's T&T.)

Along with the My-T-Myte lamps, Amplex launched a complete set of stand-

Now you can buy a great F/3.5 color camera for under $40—the new *ILOCA® QUICK 'A' 35mm.*

Here is terrific news for people who want to take color pictures of professional quality, but must watch their camera budgets carefully.

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The entire back of the Iloca Quick "A" snaps off with one quick flip of of the rewind knob. You must try this feature yourself because there has never been anything like it before. Inside, you will find a *sprocketless* take-up spool that absolutely eliminates the danger of ripped film. No fumbling — a roll of 35 mm. film can be loaded in a matter of *seconds*. The pressure plate is *chrome-plated*. Positive protection against film scratches.

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(Advertisement)

color column

Third in a series . . .

Most of us have seen fine hand-colored photographs which we admired, but we have probably seen others which did not strike us quite as favorably. Sometimes the reason one colored print stands out, stems from the manner in which the coloring was done. Here are some points that go to make a good hand-colored picture.

The fact that photo-oil coloring is so easy starts off many photographers on the wrong foot. They feel that the mere application of color will suffice. The result is that when the colors are selected and applied haphazardly, the finished print tells the tale.

The colored print should resemble the original subject as closely as possible. In many cases this is easy because the colors are named for their particular uses, such as Tree Green, Sky Blue, and others.

Nothing gives away a hastily painted picture more than poor boundaries between color areas. The colors should be carefully blended so that one color does not run over into an adjacent area. In the coloring process, the first color applied may be permitted to overrun its boundaries slightly. This overrun color need not be cleaned. When the adjoining area is colored, that color should be brought up to the already colored area carefully. In most cases this second color will remove the first color that may have spilled over.

The boundary between two different colors may sometimes appear a trifle harsh, in which case it should be softened by final blending with a very loosely wound skewer or a soft ball of cotton.

A problem sometimes arises where an object of one color has a surrounding background of different color, as branches and leaves of a tree standing out against the sky. In such a case, the predominant color, in this case the sky, would be applied over the entire area, ignoring the foliage in the foreground. After the sky color is applied and rubbed down to its proper shade, the details of the branches and leaves can be put in, using cotton-tipped skewer or toothpick. Here again, the sky color need not be cleaned off before applying the greens and browns of the trees.

In coloring a portrait one does not avoid the eyes, lips and teeth in applying the basic flesh color. Flesh color is applied over the entire face, blended down, then Extender is used to clean out the eyes and teeth, and the lips are colored without removing the flesh color. Any overrun of flesh into the hair or background areas is removed by the application of the next color.

Helpful Hint: Many professional colorists keep alongside their work a small piece of cardboard. After picking up some color, they run their applicator lightly over this card to distribute the color evenly throughout the cotton. This eliminates excess color on the cotton. The color is then applied to the photograph. With this method it is possible to get more even applications, which will require less rubbing down and blending.

The makers of Marshall's Photo-Oil Colors welcome your correspondence. If you have any problem, suggestion or comment on photo-oil coloring, drop a line to John G. Marshall Mfg. Co., Inc., 167 North 9th Street, Brooklyn 11, N. Y.

ard photoflash lamps, the Amplex Synchro-sure line. It includes the usual range of sizes from SM and No. 5 through the No. 50, a set of four daylight-blue lamps for outdoor color film, and a special 5A amber bulb balanced for indoor color film. Head of Amplex is A. M. Parker, who, in 1935, as principal owner of the Wabash Corporation (since absorbed by Sylvania), introduced and made the first wire-filled flash lamps in America under a licensing arrangement with the Philips Company.

The FM Film Processing Unit, a water jacket for stabilizing the temperature of 35-mm and rollfilm processing solutions in spiral tanks is the leading item in a new line of stainless steel equipment introduced by Franklin M. Morgan, Inc., New York 36, representatives for Bar-Ray Products of Brooklyn. Furnished in three sizes, ranging in price from $21 to $25.75, the new unit consists of a housing with a water vent at either end, a set of four spacers capable of holding developing tanks of different makes, and a light-tight lid that fits over the top of the entire unit. The dimensions of the largest model are $27\frac{1}{2}$x$6\frac{3}{4}$x$7\frac{1}{4}$ inches. It weighs 10 pounds. Among other equipment in the line are seven processing trays varying in size from 8x10 to 20x24 inches (prices from $6.35 to $31.50); a set of hypo baths and various insert tanks with floating lids for processing different sheet film sizes ($6.90 through $15.75). The "something different" that has been added by Bar-Ray to their stainless steel fabrication is the use of arc-welded, in place of soldered, seams and corners. All welds are completely finished and fully "passivated" as are the stainless-steel surfaces of the equipment proper.

"Passivation" is the process of making stainless steel impervious to the chemicals it is designed to resist. The usual method is to dip the material into a nitric acid bath which dissolves away any surface impurities which might become a focus of chemical activity. Stainless steel can become contaminated by contact with iron or carbon steel which leaves a surface stain at the very outset. The discolored area must be cleaned either by scrubbing it with stainless steel wool or by applying a special solution. Ordinary steel wool just aggravates the contamination.

Color Temperature Measurement. A significant contribution to the literature on color temperature measurement appeared in the October 1952 issue of the *Journal of the SMPTE.* The paper, *A Precision Color Temperature Meter for Tungsten Illumination,* by G. H. Dawson, D. E. Grant, and H. F. Ott of the Color Control Division, Eastman Kodak Co., is predicated on the fact that variability within currently available color temperature meters is greater than the allowable tolerances of the tungsten source itself for testing purposes. This variability is attributed to four factors: (1) differential blue and red-light diffusion and vignetting, especially when the light to be measured is off-axis or emitted by an extended

(*Continued on page* 112)

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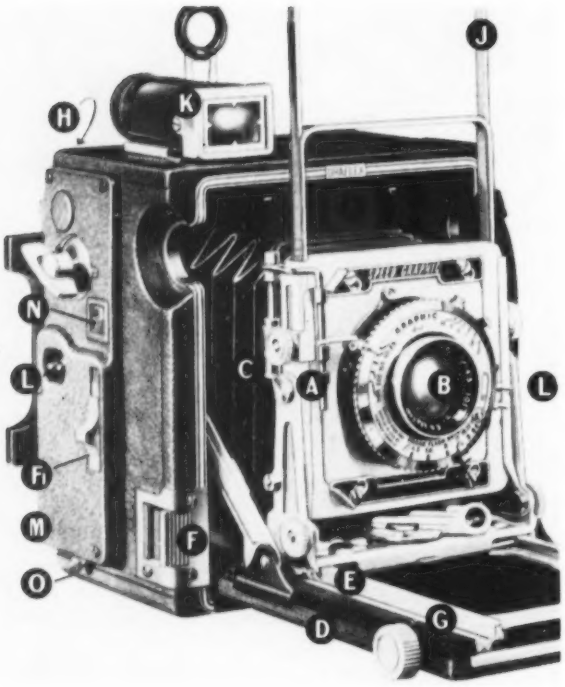

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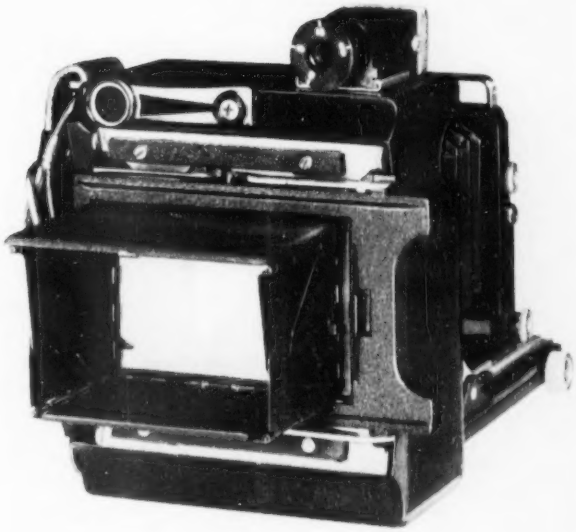

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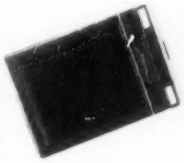

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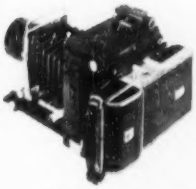

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PSA

News and Notes about the Photographic Society of America

Little "PSA's" scattered throughout the country in a move to widen constantly the circle of potential camera hobbyists is the goal of a new activity of PSA headquarters. One of the most ambitious programs the society has ever undertaken, the project, according to Norris W. Harkness, president, will attempt to answer affirmatively the question frequently asked around the country: "Does the PSA have any meetings around here?"

At a recent meeting of the society's board of directors, it was voted to set up a series of regional organizations in various areas consisting of community-minded PSA members, whose job it will be to offer periodically activity programs designed to help not only the PSA members of the region but to involve the community as well. (The plan does not apply to regions where a camera club council exists, since a PSA regional group would only overlap the council's activities.) Each regional activity, or chapter, to use a more appropriate term, will be manned by the more advanced PSA members of the region who are willing and able to donate the time and effort necessary to put the programs across most successfully.

Headquarters suggests that such jobs be rotated so that every PSA member suitable for such responsibilities be given an opportunity to show what he can do. One way to do it would be to have a different chairman for each event. Membership in the organization would be open to any PSA member resident in the particular region without additional charge unless the local chapter decided on a membership fee at the beginning in order to build up a cash reserve to defray program expenses. An alternative method of getting necessary funds would be to charge a small admission or registration fee. The income from the first one or two programs might be enough to finance an entire year's operations.

To help the regional chapters with their program planning, PSA headquarters would provide them with a group of ready-made activities in package form. One is the "Tops in Photography" program, which could be given perhaps two or three times a year. Another is the PSA town meeting idea, which has already been tried out successfully. The package in this case calls for a shooting session in the morning, group discussion by the participants in the afternoon, and a good speaker in the evening.

A third package is the one-day shooting session with lay groups, the local garden club, for example. Each of these packages—and more are on the way—would be provided with a small manual on publicity-getting, with sample releases. Chairman of the national project is W. E. Chase, APSA. The goal is twenty chapters the first year.

—*P.S. Ayers*

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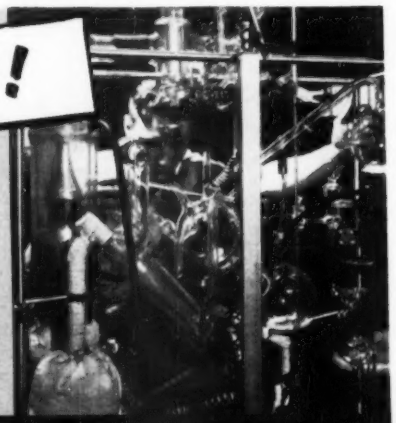

YOU CAN DO IT TOO...

HOW MUCH MONEY CAN YOU MAKE IN PHOTOGRAPHY?

NYI

President Samuel J. Falk

ANSWERS YOUR QUESTIONS

(First of a series)

"Money-making opportunities in photography are greater today than ever before in history. Scores of new picture magazines have multiplied the demand for smart photographs and trained photographers the world over. This is a booming field in which millions are spent annually—both for color and black and white. Every market for photographs has gone all out to keep up with the unprecedented public demand for pictures, pictures . . . and more pictures.

BIG EARNINGS — BIG OPPORTUNITIES

"Interested in some cold figures? Trained photographers make up to $100 a week, while $150 and much higher is commonplace for those with experience. Like to free lance? Leading magazines pay as high as $1000 and even higher for covers. Hundreds of photographers with their own studios are making incomes that put them on easy street.

LEARN AT HOME IN SPARE TIME

"These are only a few of the exciting prospects for *trained photographers.* NYI'S FAMOUS COURSE SHOWS YOU HOW! You *learn-by-doing,* with *individual* guidance from top photo experts who make up our distinguished faculty. What's more, you are shown how you can EARN WHILE YOU LEARN for spare-time income or as a profitable career.

"Find out ALL about this fascinating profession in our big, colorful FREE book. It gives you a thrilling, inside picture of the field and the interesting, money-making opportunities in it for YOU. Mail the coupon TODAY!"

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VETERANS: *You can now get NYI Correspondence or Resident training under Korea (PL 550) G.I. Bill.*

The experience of NYI Graduate Victor DePalma is being repeated every day in photography. He has already made over $3000 on this one picture alone!

Many magazines now pay free lance photographers up to $750 for a page of black and white photographs and as high as $1500 for a cover picture in color!

That's what each of ten advertising agencies spends for photos...a tiny sample of the opportunities in only one branch of photography.

RESIDENT TRAINING

Visit, write, or phone our Resident School if you prefer On-the-Spot training. Complete facilities include 14 studios, 18 streamlined labs, glamorous models, and the finest, up-to-date speed-light and color equipment. Day or night classes. Full or special Short-Term Courses. Deferred payment plan. Co-ed.

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Put GLAMOUR In Your Flash Pictures

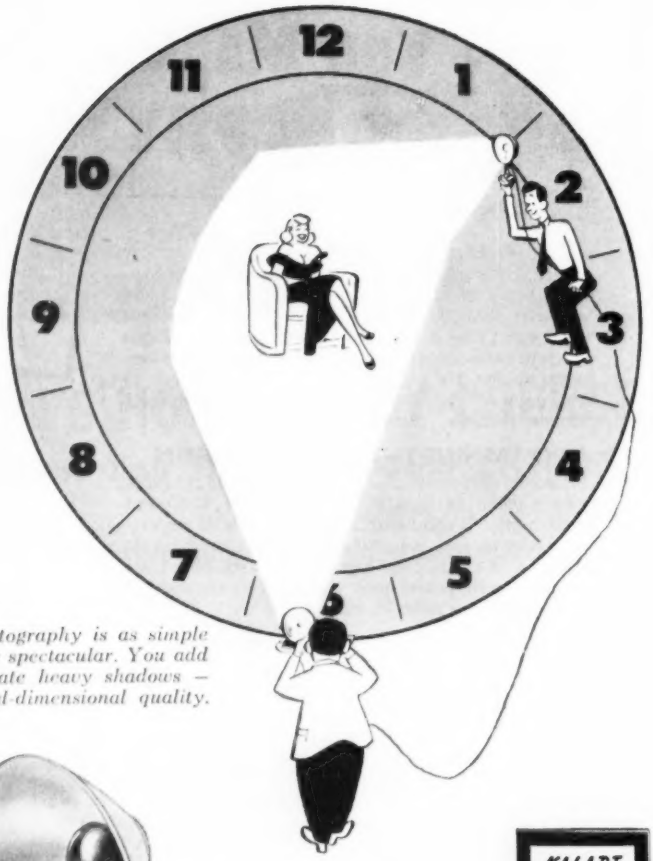
Send for FREE New

KALART®

"Round-the-Clock"

FLASH GUIDE AND EXPOSURE CALCULATOR

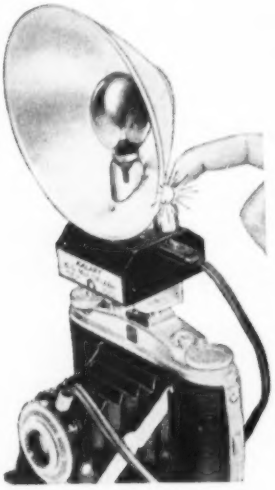
FOR COLOR PICTURES OR BLACK AND WHITE



"Round-the-Clock" Flash Photography is as simple as telling time. The results are spectacular. You add sparkling highlights – eliminate heavy shadows – give pictures a beautiful third-dimensional quality.

Hitch Your Camera to a KALART B-C and Be Certain

No other flash equipment is so easy to use and gives you so many safeguards against flash failures. You can *Be Certain* with a Kalart *B-C* because the battery is good for two years or more – because it fires flashbulbs by a new superpower method that gets top efficiency out of every bulb – because its built-in test light tells you – *before you shoot* – if battery and flashbulb are OK. Self-closing series outlet permits use of extension flash by just plugging in. Models for almost every camera, old or new. Price, for cameras with built-in sync, $14.30. © 1953 THE KALART CO., INC.



Kalart B-C Series Wired Extension Unit –

Complete with Center-Dome Concentrating Reflector with Bulb Ejector, adjustable rubber-covered spring steel clamp and 20 feet of rubber covered connecting cord, $9.85 complete.

"ROUND-THE-CLOCK" GUIDE FREE

Simple clock charts and built-in Exposure Calculator show new easy way to put glamour in flash pictures. Regular price, 25¢. Free with coupon below. This offer expires April 30, 1953. Better hurry!

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Dept. A-4

Send "Round-the-Clock" Guide — free.

Print name and address

Name of photo dealer

KALART

encore!

Rollei

Once again, Rollei scores in the national photo contests—in the leading photo annuals—in the photo journals—as well as in the number of books published on this great camera. Everywhere you look, *pictures by Rollei* lead the picture parade . . . this year, as in years before. Be sure to see automatic Rolleiflex, and the companion Rolleicord, at your local dealers.

New . . . *"Rollei Photography" by Jacob Deschin, the most complete, most practical book on Rollei. 192 well-illustrated pages. At all dealers . . . $5.00.*

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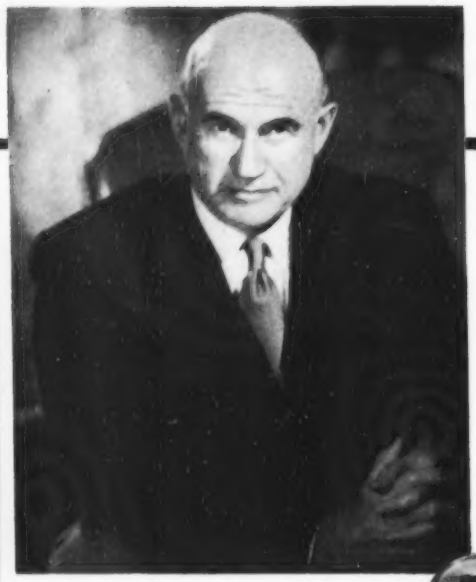
Western States, Alaska and Hawaii: **PONDER & BEST, INC.** **814 North Cole Ave. Hollywood 38, California**



A master picture maker chooses
a Masterpiece of a Camera

SAMUEL GOLDWYN
Hollywood's most exacting producer

Samuel Goldwyn is a perfectionist. He has spared neither expense nor effort to achieve the effect he wants. Recognized by Fame Magazine as the "All Time Champion of Champion Producers" for his unmatched record of 18 top hit films in 19 years, Goldwyn has also won every plaque, trophy, citation and award the motion picture industry is able to bestow.

His latest production, the **Technicolor "Hans Christian Andersen"** starring **Danny Kaye,** is the ultimate result of 16 years of exacting planning. Hans Christian Andersen will carry on the Goldwyn tradition for perfection. For personal use Samuel Goldwyn chooses the Voigtlander Prominent Camera.

Prominent personalities
prefer the

Voigtländer 35mm PROMINENT

All of the Voigtlander ingenuity, engineering skill and craftsmanship have gone into creating this newest of miniature cameras designed to take INTERCHANGEABLE LENSES.

It has a telemeter-finder (view-finder and range-finder in one unit) coupled with the lens . . . and a shutter setting which is coupled with film winding. One operation winds film and shutter mechanism. No blanks — no doubles. Its eye-level operation facilitates speedy shooting.

The handsome, sturdy die-cast PROMINENT with genuine leather covering and rich chrome trim, is equipped with the famous Ultron f2 lens assuring you of a sparkling quality never before obtainable. Has Compur Rapid M-X FULLY SYNCHRONIZED shutter and built-in self-timer. Takes sharply outlined pictures with electronic flash at 1/500th second.

With f2 Ultron lens in Compur Synchro Shutter
$225.00
With f1.5 Nokton Lens
$275.00
Carrying Case $12.50

Mail orders filled.
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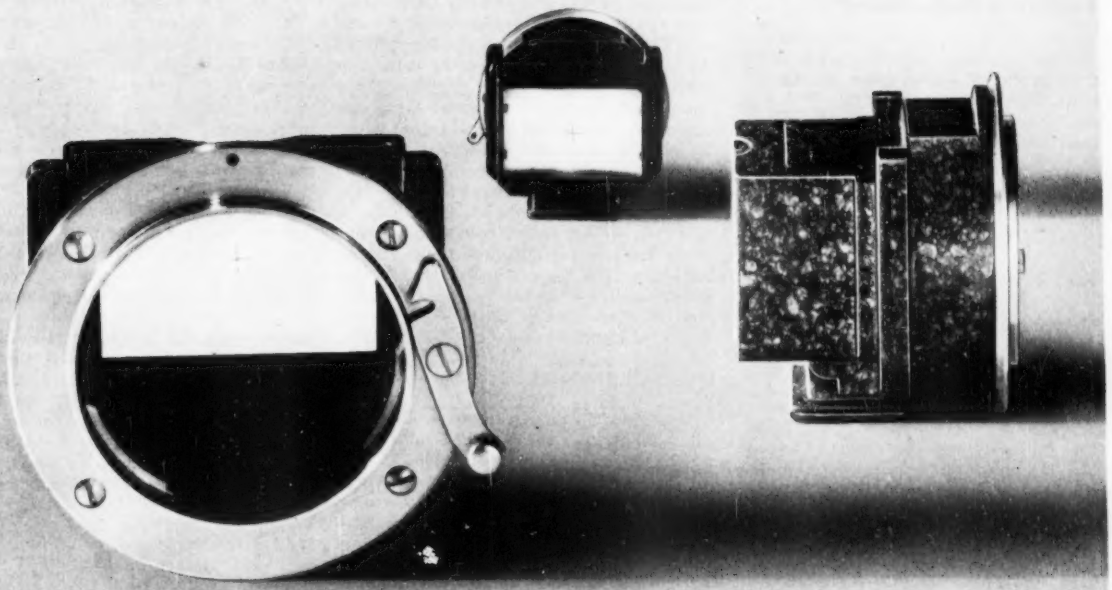
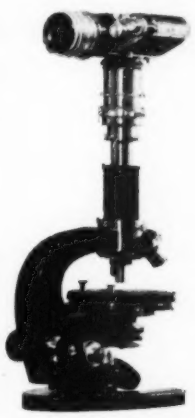
Ihagee presents a remarkable achievement in Exakta Photography

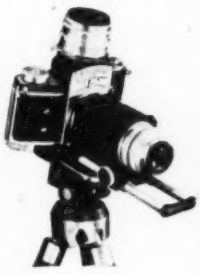
THE MAGNEAR LENS-VIEWFINDER



For Photomicrography



For Hyperclose-up Photography



Ihagee has designed a versatile, ingenious, unique viewfinder — the Magnear — which brings a new standard of precision and scope to focusing and viewfinding with the 35-mm. Exakta. The Magnear makes it possible to use the superb quality of your picture-taking lens in a remarkable way to expand Exakta Photography. Using the superlative quality and correction of a picture-taking lens with the Magnear, you can inspect the ground-glass image of your camera more critically than ever before and assure greater sharpness in your pictures. Since a lens is a distortion-free magnifier, the Magnear provides you with a much-larger-than-normal image for easier, more accurate focusing. A regular 50-mm. lens, for instance, will provide a 5x magnification. Another extraordinary advantage of this new viewfinder, especially for hyperclose-up photographers and photomicrographers, is that light coming through the camera can be measured with a photoelectric meter held to the Magnear (with or without the lens attached). This means that correct exposure can be read from the meter, eliminating time-consuming, annoying calculations. One end of the Magnear has a ground glass with a clear center spot and cross — ideal for scientific work. The other has a bayonet mount that accepts any lens with an Exakta mount. The Magnear is interchangeable with the Penta Prism and waist-level finders (of the V and VX models only) and becomes an integral part of the camera. It can be used, with the appropriate additional equipment, for hyperclose-up photography, photomicrography, telephotography, stereography and portraiture. Without lens the Magnear is priced at $25.50. We invite you to inspect it at your dealer or write for more information. Request booklet 3A-UMP.

EXAKTA CAMERA COMPANY
46 West 29th St., New York 1, N. Y.

candid shots by the Editors

Cowgirl Into Photographer

Jeanne Godshall, who made the exciting color shot of a trick rider on page 53, knows whereof she shoots; for the past seven years she has been a trick rider herself, appearing in top rodeos and fairs across the country. (See the accompanying picture of Jeanne—without camera—

DeVere Helfrich

doing a "Roman stand" at full gallop.) Photography-wise, Jeanne keeps busy shooting publicity pictures of fellow stunt riders. She has placed several covers with *Western Horseman* magazine, and won top prizes in West Coast photography contests. Our purchase for "Pictures from Our Readers" marks the first time her work has appeared in a national magazine. Jeanne writes from the C-Bar-G ranch in Victorville, Calif.: "As in all athletic professions, the trick rider's peak of proficiency is brief. Knowing that, I am seriously planning to turn my hobby of photography into a business." When she goes on the road next season she plans to shoot some freelance picture stories. Good luck in your new profession, Jeanne!

A Century of Animal-Eye Pictures

We thought we were reporting on something pretty new when we told you in the December issue about Ralph Creer's presentation to the Biological Photographic Association of the results of his experiments in making photographs with animals' eyes. But now comes a paragraph in *Image*, the journal of George Eastman House, about a "forgotten pioneer," John Benjamin Dancer, who made tiny pictures through animal eyes in 1839! If you don't think *that's* pioneering, remember that 1839 was the year the daguerreotype was announced. Dancer was interested in micro-photography, and used the eyes to reduce a document 20 inches long to one-eighth of an inch, producing (according to the report) "some minute photographic pictures; these being electrotyped, and several copies taken from each, produced the letters and images of the pictures in their proper position." This was not Dancer's only contribution to photography; in 1852 he designed a twin-lens stereo camera, and there are a score of other photographic patents in his name. Maybe there really is nothing new under the photographic sun. Next we'll be hearing that electronic flash is a hundred years old too!

National Photo Show

This year's bigger, better National Photo Show will be held in Grand Central Palace, New York, February 12 to 16. If you can manage to be in New York then, don't miss it. As usual, PHOTOGRAPHY will have a big display, with pretty girls to photograph and prizes for your pictures of them. The Editors look forward to meeting all visitors. This year, heavy stress is being laid on the educational aspects of the show, and one of the stellar attractions will be a display of celestial photography—black-and-white and color, still and movie—by Peter Leavens, in cooperation with the world-famous Hayden Planetarium. You'll remember Leavens as author of last month's article on photographing lunar eclipses. Tied in with his display will be exhibits of telephoto equipment within the amateur's budget. Another spectacular feature of the show will be a scale model railway, built by the Baltimore and Ohio Railroad, which will sponsor a contest for photographs taken of the model layout by visitors to the show. An innovation will be the exhibition of prize-winning pictures from the Newspaper National Snapshot Awards. All in all, it promises to be a worthwhile show. See you there!

A Wife's Devotion

Carol Schwalberg didn't know, when she married Bob last September, that she'd be called upon within a coupie of months to make such a sacrifice. But any girl who marries a photographer these days has to be prepared for anything. All Carol had to do this time was to wear the same dungarees and T-shirt for seven weeks (though not continuously!), and stay awake while her husband made a thousand pictures of her. It was in connection with Bob's extensive experiments with SD-19a, the high-powered developer you'll read about on page 40. To get definitive results, he had to try a dozen different 35-mm, 120 roll, and 4x5 sheet films, foreign and domestic. A model was out of the question; his bride was the obvious answer. She agreed to sit (or rather, recline) for him, and to keep the shirt and dungarees on hand, unwashed, for the duration of the tests, to guarantee that all the test shots would contain the identical tonal values. A thorough man, that Schwalberg! Carol had some difficulty in keeping awake, as would anyone under such conditions. Here's one of the

pictures in which she began to nod. This one was made on Super-XX, rated at ASA 3,000, with exposure of 1/50 second, f/5. Light came from three 60-watt bulbs in a ceiling fixture, with a color temperature of about 2800 K.

Four-Eyed Stereo Columnist

If you're a stereo fan (as you must be if you've followed Bob McIntyre's new column these four months), you may already have seen the self-portrait he made to impress us with the rigors of judging innumerable stereo slides (on page 84). If you're wondering how he made it, here's what he writes: "The procedure is: (1) make a straight print, holding back the forehead area just above the brows with a dodger, and (2) move the easel toward you by the amount of space you want between pairs of eyes, and (3) print the eyes into the forehead area that was held back. Same negative remains in enlarger and is not touched between exposures. Use aperture-board to shield rest of paper while printing eyes. I'm the guy who's got the forehead for it!" And if you think this is an off-beat printing trick, wait until you see what Weegee (of Elastic Lens fame) has in store for you in the April issue! He's turned his own head upside down, just for us, and he'll tell you how to do it yourself.—

Never Undersold!

RETINA 11A
F:2 ctd. Rfdr, Synchro
LIKE NEW.. **$117.00**

NORWOOD DIRECTOR
Latest, Grid & [illegible] Dem.
NEW.... $[illegible]

35MM CAMERAS

	NEW	USED
Ansco Karomat F:2 ctd. Synch.	$[illegible]	$ [illegible]
Argus C-III, F3.5, Flash, Case	[illegible]	[illegible]
Argus C4, F:2.8 ctd. case	[illegible]	[illegible]
Bolsey "B", F3.2, Ctd. RF	[illegible]	[illegible]
Bolsey B-2 F:3.2 ctd. RF	[illegible]	[illegible]
Bolsey "C" Reflex, RF	109.50	[illegible]
Canon, Serenar f-1.8, [illegible]	295.00	[illegible]
Contessa 35 Tess 2.8 [illegible] Synch.	214.[illegible]	[illegible]
Kodak 35 Rfdr. F3.[illegible]	86.[illegible]	[illegible]
Nikon, F1.4 ctd. R[illegible]	349.00	[illegible]
Praktica, F:2.9 ct[illegible]	58.50	[illegible]
Rectaflex, Xenon [illegible]	295.00	[illegible]
Retina II Xenon [illegible]	[illegible]	[illegible]
Revere Stereo [illegible] ctd. Rfdr.	174.50	[illegible]
Robot II Synch. Xenar F1.9	108.00	[illegible]
Robot 'Star' Biotar F:2	228.[illegible]	[illegible]
Tele-Xenar for Robot, ctd	46.50	[illegible]
Voigtl. Vito B F3.5 Synchro	[illegible]	[illegible]
Voigtl. Prominent F1.5	[illegible]	[illegible]

KINE EXAKTA

	NEW	USED
Kine Exakta I Tess F:3.5	.....	87.50
Kine Exakta II Biotar F:2	.....	156.00
Kine Exakta V Tess. F:3.5	.....	139.00
Kine Exakta [illegible] F:2	.....	179.00
Kine Exakta VX Tess. F3.5	229.00	178.00
Kine Exakta VX Biotar F:2	343.00	236.00
35mm Retrofocus F:2.5 W.A.	99.50	62.50
40mm Tessar F:4.5 W.A.	99.00	49.00
58mm Biotar F:2 pre-set	170.00	[illegible]
75mm Biotar F:1.5	216.50	[illegible]
85mm Steinheil F:2.8	68.00	49.50
135mm Steinheil F:4.5	60.00	39.00
135mm Xenar F:4.5	58.95	39.00
150mm Tele Megor F:5.5	55.95	38.00
180mm Sonnar F:2.8 pre-set	395.00	242.00

LEICA

	NEW	USED
Leica IF. Synchro. Latest	$ 73.10	$.....
Leica D, Elmar F3.5	.....	76.50
Leica G, Summar F.2	.....	127.50
Leica IIIC Elmar F3.5	259.00	139.00
Leica IIIC Summitar F.2	359.00	187.00
Leica IIIF Summitar F.2	384.20	.....
Leica IIF, Synchro. Latest	139.40	.....
28mm Serenar F3.5 W.A.	177.85	118.00
35mm Elmar F3.5 W.A.	.....	83.00
35mm Summaron F3.5 W.A.	102.00	69.00
50mm Elmar F3.5	68.00	34.00
50mm Summitar F.2	173.40	98.00
50mm Summarit F1.5	224.40	159.00
50mm Nikkor F1.4	198.00	138.00

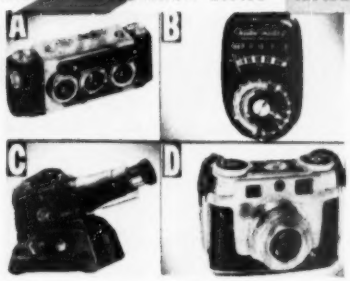
	NEW	USED
73mm Hektor F1.9	.....	72.00
85mm Summarex F1.5	442.00	198.00
90mm Elmar F.4 Black	.....	54.00
90mm Elmar F.4 Chrome	112.20	71.50
135mm Hektor F4.5	150.00	74.00
200mm Telyt w/reflex housg.	258.00	196.00

CONTAX

	NEW	USED
Contax 'S' Biotar F.2	235.00	[illegible]
Contax II Sonnar F:2	.....	[illegible]
Contax II Sonnar F1.5	.....	[illegible]
Contax IIA Sonnar F.2	444.00	[illegible]
Contax III Sonnar F1.5	.....	[illegible]
Contax IIIA Sonnar F1.5	534.[illegible]	[illegible]
35mm Biogon F2.8 W.A.	229.[illegible]	[illegible]
Biogon W.A. For IIA & IIIA	[illegible]	[illegible]
50mm Sonnar F1.5	[illegible]	[illegible]
85mm Sonnar F.2	[illegible]	[illegible]
135mm Sonnar F[illegible]	[illegible]	[illegible]
Contamat for [illegible]	[illegible]	[illegible]
Speed [illegible]	[illegible]	36.50
Zeiss [illegible] finder	[illegible]	.....

REFLEX & ROLLFILM

	NEW	USED
[illegible] Reflex	76.50	48.00
[illegible]	93.50	68.50
[illegible] Camera	246.75	128.00
[illegible] Ektar F2	499.50	346.00
[illegible] Camera	89.75	57.[illegible]
[illegible] Reflex, Primotar [illegible]	189.50	[illegible]
[illegible] Reflex Tess. 2.8 [illegible]	250.00	[illegible]
Rheinflex F3.5 synchro	42.[illegible]	[illegible]
Rolleicord II F3.5	[illegible]	84.00
Rolleicord III Xenar 3.5, ca[illegible]	149.[illegible]	92.00
Auto Rolleiflex, Xenar [illegible]	[illegible]	118.00
'XM' Auto Rollei, T[illegible] 3.5	285.00	189.00
'XM' Auto-Roll[illegible] Xenar 2.8	265.00	168.00
Medalist E[illegible] F3.5 M[illegible]	.....	89.00
Medal[illegible] Biotar F[illegible] Rfdr.	297.50	157.00



Ⓐ **STEREO REALIST**
F:3.5 ctd., synchro. cpld. Rfdr. L. N.
SPECIAL....$104.00

Ⓑ **WESTON MASTER II**
Exp. Meter, Latest, Dem.
NEW.....$21.45
WESTON CADET. 14.00

Ⓒ **GOLDE NUMATIC**
2x2 Slide projector 300W Blower.
LIKE NEW... $34.00

Ⓓ **KODAK SIGNET**
35mm, Rangefinder, Ektar F:3.5, synchro.
LIKE NEW... $59.00

	NEW	USED
Minox 'Spy' Camera F3.5	71.[illegible]	38.00
Super Ikonta A Tess. 3.5 Rfdr.	162.[illegible]	68.00
Super Ikonta B Tess. 2.8 Rfdr.	[illegible]	94.00
Super Ikonta C Tess. 2.8 Rfdr.	[illegible]	114.00
Super Ikonta BX Tess. [illegible]	[illegible]	[illegible]
Voigt. Bessa II R [illegible]	[illegible]	[illegible]

PROJECTORS—8 & 16mm

	NEW	USED
[illegible] Model [illegible]	99.95	.....
[illegible]	169.50	104.00
[illegible]	149.[illegible]	86.00
Revere [illegible]	11[illegible]	63.00
Revere [illegible] Case	[illegible]	89.50
[illegible]	[illegible]	63.75
[illegible] Sound 28[illegible]	449.95	289.00
Rev[illegible] Magnetic Sound 202	699.95	.....
Rev[illegible] Sound	325.00	189.00
Movie Mite Scund & Silent	269.50	126.50
Ampro Tape Recorder	119.75	72.00
Revere Tape Recorder	169.50	106.00

CAMERAS—8mm & 16mm

	NEW	USED
B&H Companion, F2.[illegible]	79.95	46.50
Bolex L-8, F2.8	97.00	51.50
Bolex H-8 [illegible]	291.50	168.00
B&H [illegible] Latest	134.95	84.00
[illegible] F2.5	77.50	42.50
[illegible] Mag. 8 F2.5	106.95	59.00
Revere 50, Latest, F2.8	49.50	27.00
Revere 861 Mag. F2.5	112.50	64.00
16mm B&H Filmo 70DA F1.9	.....	188.00
B&H Autoload F1.9	142.50	96.00
B&H Auto Master F1.9	179.50	118.00
B&H 200 Mag., F1.9	214.95	134.00
B&H 200T Mag. Turr. F1.9	259.95	168.00
Bolex H-16, Leader F1.9	299.50	168.00
Keystone A-7 F2.5	76.50	36.50
Kodak Mag. F1.9 Ctd. Foc. Mt.	.....	79.00

SLIDE PROJECTORS & ENLARGERS

	NEW	USED
Argus FB 100 Slide Proj.	29.95	18.75
SVE 'Skyline' 200 W.	34.75	18.50
SVE 'Skyline' 300 W. Blower	52.45	29.50
Golde Reflex 2¼x2¼ 300 W.	86.50	52.00
La Belle 500 W. Automatic	95.35	54.00
TDC Mainliner 300	58.50	36.50
TDC Duo 2¼x2¼, 300W	69.50	42.50
DeJur Versatile II F4.5	99.50	67.00
DeJur 4x5 F4.5	172.50	118.00
Federal 2¼x3¼ F6.3	39.75	24.00
Federal 35mm F4.5	49.95	32.00
Leitz Focomat 1C	147.00	98.00
Omega D-11, 4x5	168.50	118.00
Solar 120, 2¼x3¼	66.50	37.00

AUTO ROLLEIFLEX
Tessar F:3.5 Synchro.
LIKE NEW.... **$138.00**

EXA CAMERA
F:2.9 ctd., Synchro 'MX'
LIKE NEW.....$62.50

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THE PHOTOGRAPHIC YEAR *a review of Progress in 1952*

By DR. WALTER CLARK, FPSA, FRPS
Kodak Research Laboratories

THERE IS, of course, progress every year. Every idea from each new little trick to every big invention makes it. The amateur and the scientist contribute, not only to their own field, but to the whole picture of photography. Progress does not necessarily mean new things for the amateur. It means new things for somebody in photography, and this is eventually for the good of all. In 1952, actually, many of the new developments were not in fields which are of immediate interest to most photographers, yet some of them involved basically new aspects of photography. They were worked out for special cases, but they cannot fail to have repercussions throughout the entire field—positives instead of negatives in a single development stage, developing at 125 instead of 68 F, sharp pictures with low resolution, and others.

Color photography is increasing in popularity at a rate which must far exceed the dreams of its most enthusiastic proponent. At least one of the leading manufacturers has stated that color is the pivot about which much of its research and development program revolves, and that increasing production of color products is a primary concern in the improvement of its plant facilities.

According to Eastman, new film and paper are being developed for aerial photography in color by the military. A new color product announced during the year was Kodak Ektachrome Roll Film, Type B, in No. 120 and 620 rolls, balanced for 3200 K studio lamps, and usable with other lamps and with daylight in conjunction with appropriate filters. In keeping with the rapidly increasing interest in color stereo slides, 35-mm Kodachrome Film, Daylight and Type A, can now be obtained specially loaded to provide twenty 23 x 24 stereo pairs with standard spacing between the pictures, and the stereo pairs will be mounted for hand viewing before returning them to the photographer.

It was stated earlier in the year that the quality of Kodacolor prints had been improved and that experiments were under way with a new type of Kodacolor paper for professional photographers.

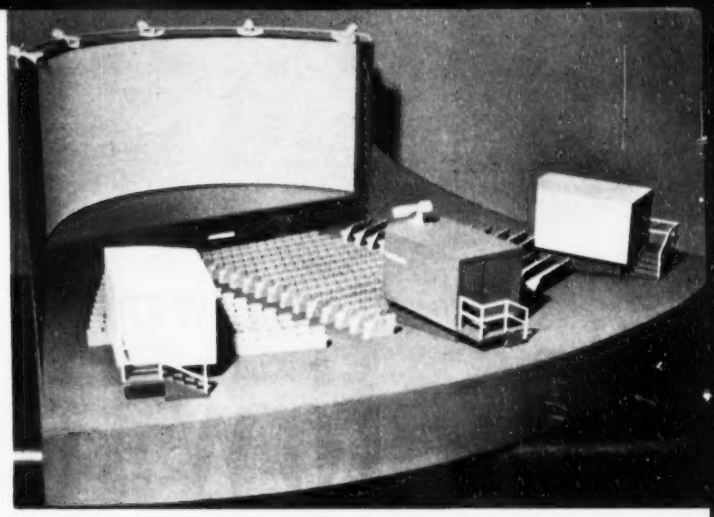
Flash lamps balanced for different types of artificial light for color films have been put out by the Dura Electric Co. under the name Dura-flash.

The technique has been described for making Ansco Color Printon prints directly in the camera. A mirror is needed in front of the lens to give a picture the right way round, the effective speed of the material is increased by doubling the time of first development, and adequate contrast is achieved by increasing the time of color development.

The increasing use of color in the motion picture field is obvious to theater-goers, and a high standard of quality is apparent. Technicolor still dominates the scene, but films by other processes seem to be increasing here and abroad. Early in 1952, great interest was created by the first public showing in this country of *The Royal Journey*, a documentary record in color of the journey of Princess (now Queen) Elizabeth and the Duke of Edinburgh to Canada and Washington in 1951. The film was shot on Eastman Color Negative Film (similar in structure to Ektacolor film) and the first prints were on Eastman Color Print Film. Other release prints were made on DuPont Color Release Film Type 275. The Eastman negative-positive color process was used for a number of other films during the year. The WarnerColor process was used for *The Lion and the Horse*, *Carson City*, and *The Miracle of Our Lady of Fatima*.

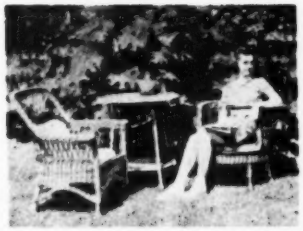
A number of theater films have also been made by the Ansco Color process as shorts, and it is understood that the first feature by the process was shown in London early in the year and later in this country as *The Wild North*, the prints in England being on Gevacolor film.

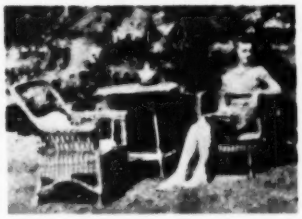
In the world of amateur (*Continued on page 77*)



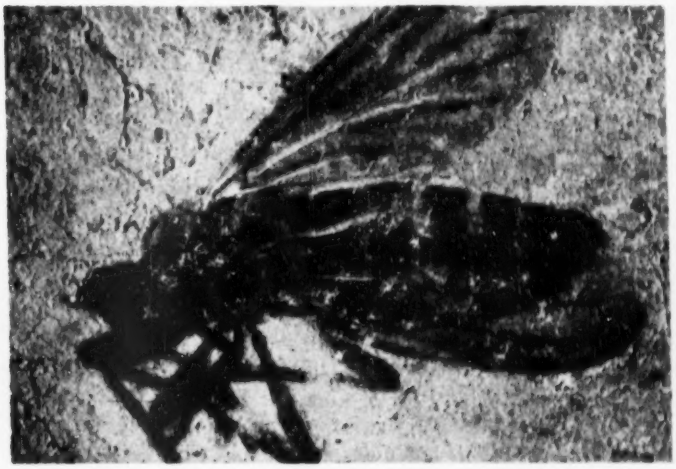
Cinerama, a hit in New York City, is planned for duplication in other areas. Highly dramatic realism is achieved as three projectors throw images on concave screen and sound is emitted from front, sides, rear.

Thin sections of skin tissue, radio-activated by Thorium X, record own photographic image as specialized nuclear-track emulsions are applied to them. Autoradiograph experiments were made by V. H. Witten, MD.





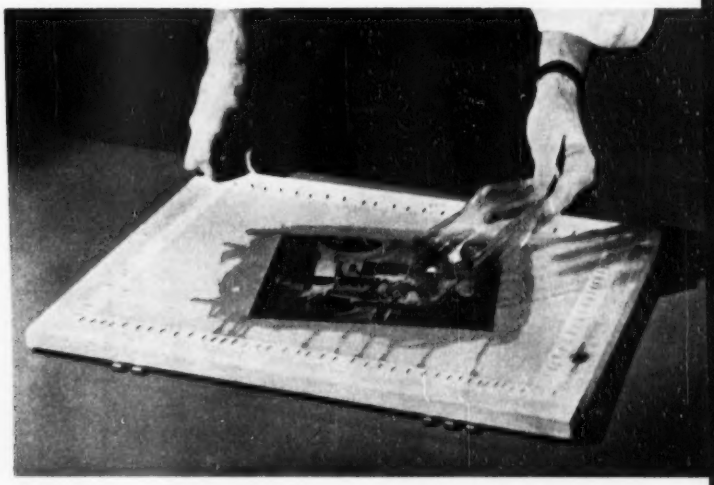
Upper print of pair at right is noticeably sharper than lower print even though made on film with only half the resolving power, as ordinarily measured. Kodak researchers Higgins and Jones determined more precise criterion of sharpness termed "acutance"—measured density variations across edge of a dense area obtained by exposing film partly shielded by knife-edge in contact with emulsion.



Bug preserved in volcanic ash for 20 million years in what is now Montana was shot by Henry Zuidema who split shale in which fossil was imbedded and used a photo-copying outfit and Micro-File Film.

Fast copying of office letters is assured with Verifax. New system is photographic, works in room light, turns out three good reproductions in a minute.

Improvement on photosensitive glass is Corning's Fotoform—which shows great promise in the photoengraving industry. Processed glass is acid etched.

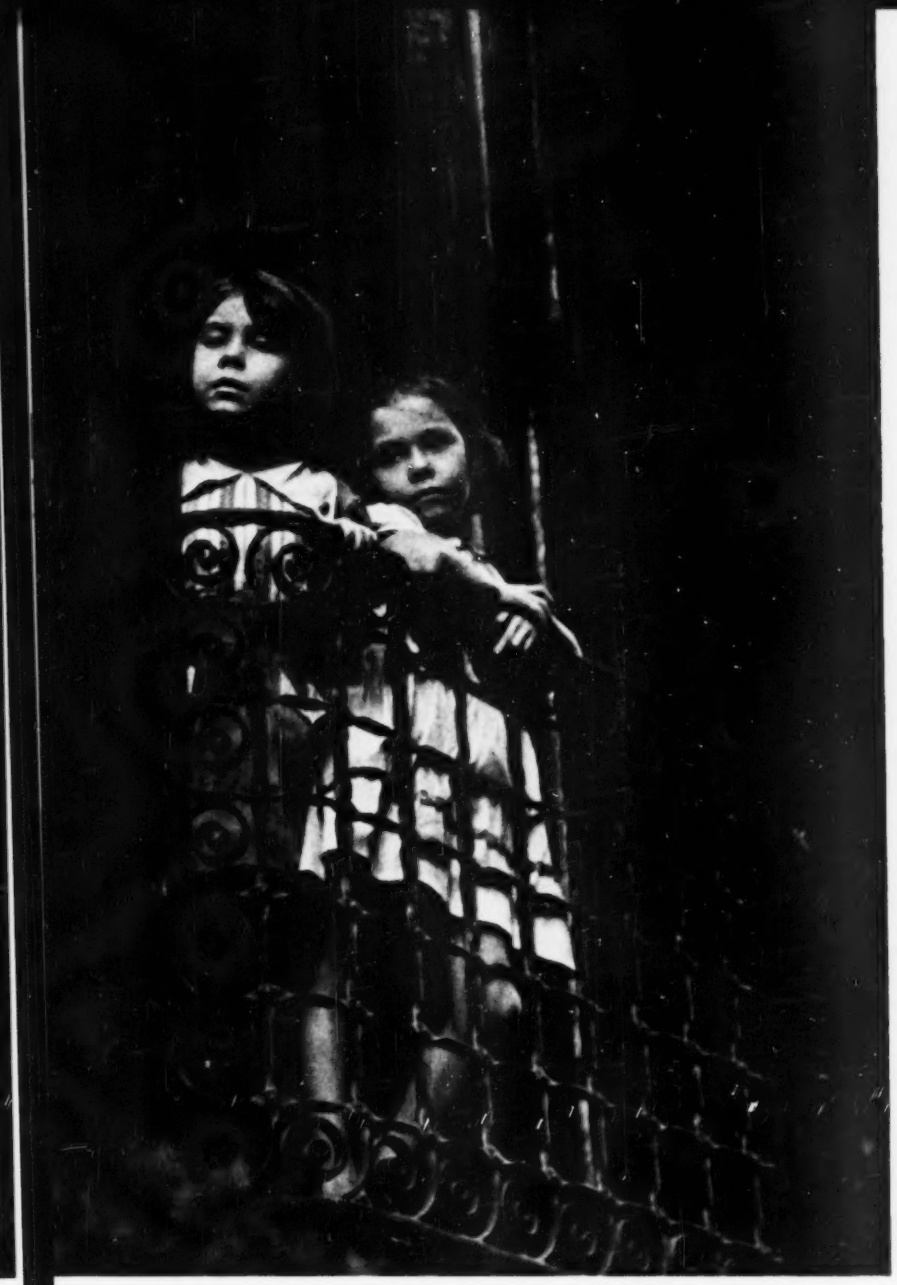


Silk-screen reproduction is aided by new Ektagraph stripping film. Stencil is applied to film, ink is squeegeed through stencil onto paper. Quality, using 60-line screen, resembles that of good photograph.

BOY WITH A BORROWED CAMERA

A YOUNG PHOTOGRAPHER WITH REAL TALENT USED A CLASSROOM CAMERA TO MAKE REVEALING PICTURES OF HIS ENVIRONMENT

Haven from crowded streets is where you find it on the East Side. Ken Wittenberg doesn't try to glamorize the kids in teeming tenements or the restless teen-agers playing in local pool rooms.



NEW YORK'S turbulent Lower East Side has been a spawning ground for many great names, and accomplished artists have fought their way out of its cloying grasp to make their mark in the theater, the professions and in business.

One young man who shows great promise as a photographer is now fighting the old battle to get started. He is Ken Wittenberg, a talented 18-year-old with an insatiable urge to be a professional.

These pictures are Ken's, and they were made with a borrowed Ciro-flex that belongs to the Henry Street Settlement where Ken learned most of what he knows about picture-taking. His teachers were Nellie Peissachowitz and Rae Russell, both established professionals, who conduct the classes.

When Ken was 14, he walked into a photography class at the Settlement. He hadn't ever developed a roll of film or taken a picture. However, he found that making pictures was as natural to him as breathing, and he'd as soon give up one as the other. He recently graduated from New York's High School of Industrial Art, and now has more time to devote to taking the kind of pictures that are important to him.

For Ken, life now has a goal—the pages of the country's leading magazines. He is interested in the work of W. Eugene Smith, Ed Feingersh and Leonard McCombe, and he wants his pictures published in the same magazines that publish them.

Ken strives for realism and is pretty well sold on available light photography. He doesn't own a flashgun or any artificial lighting equipment, and he definitely prefers a twin-lens reflex camera. He wants to do picture stories, and he makes small sets of pictures showing his native *milieu,* which he certainly knows.

Ken now owns the first "good" camera he has ever been able to call his own, and the payment for these pictures made it possible for him to buy it.—

The East River is the East Side's front yard. Many of Ken's pictures are of the kids who use the wharves for their playgrounds and swimming holes.

SD-19a THE WORLD'S MOST POWERFUL

Probably the fastest single-solution developer in existence today is Kodak formula SD-19a. A product of wartime experimentation with aero film developers at the Kodak Research Laboratories that did for exposure indexes what the Los Alamos project did for high explosives, this little-known formula is capable of truly astronomical film speeds with almost unbelievable shadow detail and readily-printable highlights. Designed for large aerial roll films which are seldom blown up, this super-speed developer has been almost completely overlooked in the post-war period. A very small group of press photographers, however, has quietly applied its tremendous power to 4x5 sheet films. Working with the relatively slow lenses common to press cameras under conditions in which the use of flash is either undesirable, impractical, or prohibited, SD-19a has proved capable of delivering effective film speed ratings in the thousands. How much speed you can get with SD-19a, or any other developer, is not entirely governed by the physics and chemistry of

THESE PICTURES WERE

DEVELOPED IN DEKTOL

DEVELOPER

SHOT AT 1/100 AT f/6.3

DEVELOPED IN SD-19a

HERE'S ALL YOU NEED TO MAKE IT:

D-19 developer, from any photo dealer . . .

PLUS Anti-Fog No. 2 from any dealer . . .

PLUS hydrazine (see text for sources).

FORMULA AT END OF THIS STORY

By BOB SCHWALBERG

HOW SD-19a WORKS WITH VARIOUS FILM TYPES

Film Size	*Emulsion giving best results*	*Maximum effective ASA rating **	*Range of developing time #*
4x5 sheet film	**Kodak Super Panchro-Press Type B**	**ASA 4,000**	**16 to 24 min.**
2¼x2¼ roll film	**Kodak Super-XX**	**ASA 2,000**	**12 to 14 min.**
35-mm roll film	**Kodak Super-XX and Plus-X**	**ASA 1,000**	**9 to 11 min.**

** These figures are based upon maximum ratings practical under a wide variety of available-light situations. When the level of illumination is very high, and the color temperature of the light is in excess of 3000 K, a full stop or more extra speed can often be obtained.*

 # The figures listed in this column represent the time range within which we were able to obtain acceptable quality and maximum film speed.

Temperature: 68-72 F. Agitation: intermittent, 5 seconds every other minute. Agitate vigorously during the first few seconds after immersion.

exposure and development. The photographer, his ideas about photography and photographic print quality, his private prejudices and neuroses—all these count for at least as much as any mere scientific fact.

About five years ago many photographers stumbled upon D-76F and were immediately delighted with a developer that would permit them to shoot at ASA 500 plus. The grain was fierce and the highlights frequently so burned up that dimly-lighted scenes often were misrepresented as overexposed studio set-ups. This extreme blocking-up was due almostly entirely to development. When development was cut, however, the shadow areas were far too thin. So exposure was increased to help the shadows, immersion times reduced to protect the highlights, and the same people stopped talking about ASA 500 and started making pictures of much better photographic quality at ASA 250 and ASA 300.

How fast you will be able to shoot with SD-19a will likewise depend very much on you. If you're willing to tolerate more grain and greater contrast you can have a lot more effective emulsion speed than if you are not.

In testing more than a dozen types and sizes of American and European films with SD-19a development we worked closely with Ralph Baum, director of Modernage, the well known photofinishing establishment catering to professional photographers, and no stranger to these pages. Our aim in each case was to find the highest effective film-speed ratings that would yield a standard of quality that Ralph could unashamedly offer to his exacting clientele. Here is what we found:

Our biggest problem was with excessive fog levels. Fog, a uniform depositing of density all over the negative, is often very desirable. This is because the fog builds up the shadows proportionally more than it increases highlight densities. In this way shadow areas are brought more in line with the rest of the negative, reducing over-all contrast. All high-energy developers depend to a great extent upon higher-than-normal fog levels. As a matter of fact, these super soups give no real increase in effective film speeds until such advanced fog levels are reached.

SD-19a depends for its kick upon the hydrazine compound (hydrazine dihydrochloride) in Solution A of the formula. This organic reducing agent acts to increase effective emulsion speed and contrast by inducing active development of underexposed grains in the vicinity of exposed, normally-developing grains. But if this is allowed to continue too long the grain balloons up to basketball proportions, most of the highlights become unprintable, and the sharpness of the negative rapidly disintegrates.

Another interesting finding is that for every film there is apparently a narrow range of optimum developing times after which the increase in fog and grain is not accompanied by any increase in shadow detail, and prior to which there is just as much fog and grain with much less shadow detail than at optimum time.

Using 4x5 Kodak Super Panchro-Press Type B we found that an immersion time in SD-19a of 20 minutes gives an effective film speed rating of ASA 4,000 with unobjectionable grain, printable highlights, and more shadow detail than we had any right to expect. When we reduced the time of development to 16 minutes, identically exposed negatives lost quite a lot of shadow detail, failed appreciably to reduce heavy highlight densities, and, because the negative was somewhat thinner, made the fog appear even heavier. By increasing the time of development, no worthwhile increase in shadow detail was obtained, and the grain became progressively more pronounced until, at about 30 minutes, it was absolutely prohibitive.

Where the amount of light was greater than 32 on the Norwood meter with the slide out—1.4 on Weston meter—and especially in cases where the incandescent light had color temperatures higher than 3,000 K, ratings like ASA 6,000 and even ASA 8,000 produced acceptable prints. This extra burst of effective film speed in light that is brighter and more actinic is common to almost all high-energy developers as both factors tend to help break down the film's inertia and make the reaction to light proceed faster and further.

The contrast of Super Panchro-Press Type B sheet film developed in SD-19a most closely resembles that obtained from DK-60a, and is, therefore, higher than normal. Such things as white shirts,

ASA 4,000 was rating used for 4x5 Super Panchro-Press Type B in picture of Ralph Baum. With slide out, Norwood meter read 12, for exposure of 1/100 second, *f*/5.6. Film got 16-minute development in SD-19a. At manufacturer's speed rating of 125 for normal development, this shot would have required exposure of about ½ second, *f*/5.6.

Child's portrait was shot in weak daylight at ASA 1,000 (Weston 800) on Plus-X with Contax. Weston meter read on low side of 6.5 block, indicating exposure of 1/125 second, *f*/6.3. Face needed some dodging. If film had been used at recommended rating of 50, exposure would have had to be about 1/5 second at *f*/6.3 for comparable results.

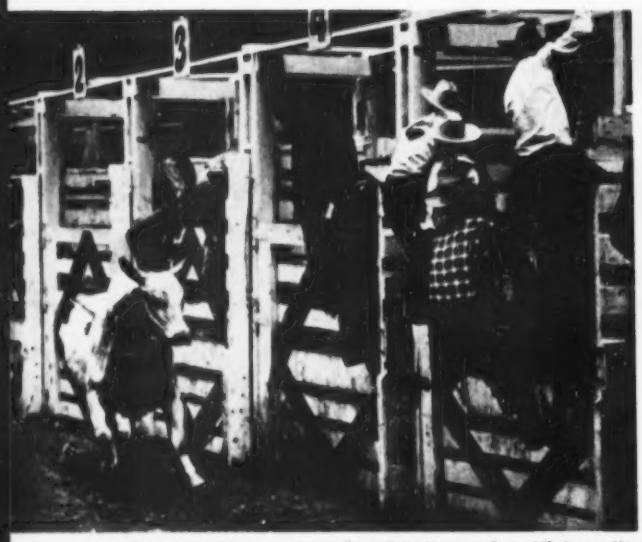
WHAT YOU CAN DO WITH SD-19a

- *Stop envying the man with an f/2 lens.*
- *Take pictures in almost any indoor situation with a folding camera having an f/6.3 or faster lens.*
- *Make available-light pictures using exposures that can be readily hand-held.*
- *Add increased depth of field to your available-light photography.*
- *Stop action with shutter speeds not otherwise possible in indoor available-light photography.*
- *Get pictures in places where flash is prohibited: TV studios . . . museums . . . art galleries . . . churches . . . restaurants . . . the UN.*
- *Get more natural candid photographs of children at home by avoiding the use of flash and flood.*

papers and the like will usually require a moderate amount of burning-in when enlarging. Harry Amdur, Modernage's ace printer, reported that the SD-19a negatives he blew up presented no special problems and that the amount of burning-in was normal for the type of subject matter portrayed. Harry's best results were obtained with a cold-light enlarger which tends to minimize graininess and contrast. For enlarging SD-19a negatives both cold-light and diffusion units are to be preferred to the straight condenser system of enlarger illumination.

In general, *when film development is forced in high-energy developers,* 2¼x2¼ roll-film emulsions will afford markedly higher maximum effective film speeds than are available from 35-mm negatives of the same name. This is due in part to the small area of the 35-mm negative which necessitates larger degrees of enlargement, thereby further magnifying the grain, if we are to have prints of equal size. But of even greater importance is the fact that 35-mm films tend to fog more rapidly than corresponding emulsions in larger sizes. This makes 35-mm films a little faster than their big brothers in roll-film sizes *when development is not forced.* Processed in SD-19a, the disparity between the amount of effective film speed obtainable with 35-mm and 2¼x2¼ roll-film is at least one full stop in favor of roll film.

Under dim lighting conditions, for example when the Norwood meter read about 8 with the slide out, .35 on the Weston meter, Kodak Super-XX roll film gave excellent results when exposed between ASA 2,000 and ASA 3,000 and developed for times ranging from 12 to 14 minutes in SD-19a at 68-72F. After 15 minutes, the fog and grain began to build up, and this appears to be the furthest this film can be developed in SD-19a as the fog becomes prohibitive. Where the light was significantly brighter and (*Continued on page* 118)



Brahma bull was stopped in 1/100 second, f/4, on 35-mm Plus-X. Norwood meter with slide out read on low side of 32 block to give effective ASA rating of 1,500 for this shot. Rating of 1,000 would have been better.

High quality obtainable by shooting Super-XX roll film at ASA 2,000 is shown in picture of author's wife. Exposure, under normal room light, was 1/25 second, f/5.6, and film was developed 12 minutes in SD-19a.

Latin Quarter chorines (opposite page) → were shot on Super-XX roll film at ASA 4,000. Underexposure of 1/100 second at f/6.3 required 16 minute development in SD-19a. This is a 15-diameter enlargement.

EXCLU

SIVE:

1952

BEST OF THE NEW YORK PRESS

These were the judges of the 17th Annual Awards of the Press Photographers Association of New York: front row, from left: Jack Downey, *Daily Mirror*, president of PPANY; Harold Blumenfeld (light suit), picture editor, United Press News Pictures; Cavio Sileo, assignment editor, International News Photos; Everett Walker, managing editor, *Herald Tribune*; B. G. Davis, president, Ziff-Davis Publishing Co.; Paul Sann, executive editor, *New York Post*; rear, from the left: Hinson Stiles, managing editor, *Daily Mirror*; Robert Tieken, picture editor, Associated Press; Sam Day, managing editor, *Journal-American*; Robert Shand, managing editor, *Daily News*; Ben Wickersham, picture editor, *Look*; Russell Countryman, picture editor, *Newsweek*; Ray Mackland, picture editor, *Life*; Rita Gam, film star; Thomas W. Schroth, managing editor, *Brooklyn Eagle*; John Randolph, managing editor, *The New York Times*; and George Torrie, *Daily News*, chairman, exhibit committee of PPANY. (The two PPANY men did not take part in the judging.)

← BEST OF SHOW

. . . and winner of first prize in portraits.

Ike scowls—and a shutter clicks, recording another candid moment in the century's hottest presidential campaign. The alert cameraman was Bert Brandt of United Press Newspictures. He made this top-prize shot while covering a post-convention meeting between Eisenhower and Republican leaders at Ike's 60 Morningside Drive residence. Brandt used standard press photographer's equipment and technique: a 4x5 press camera loaded with fast pan film, and a No. 5 flashbulb on camera. 1/400 second at *f*/16.

THE YEAR'S NEWS in pictures passed in dramatic review one night last December when 14 men and a glamour girl met in a Park Avenue penthouse to judge the 17th Annual Awards of the Press Photographers Association of New York. The 664 entries, representing the cream of New York press photography during 1952, told an exciting story—shipwrecks and political campaigns . . . championship boxing matches and a sizzling world series . . . gags, gore, and glamour. All in all it was a memorable year for Gotham's corps of sharp-eyed cameramen.

However, news content alone was not enough to sell the judges, who included case-hardened managing and picture editors from top newspapers, magazines, and press associations. They looked for more than mere surface reporting and sought examples of photographic insight, the decisive moment, the revealing angle. Some of their award-winning choices are reproduced here, including the candid portrait of

By JACK DOWNEY
New York Daily Mirror
President, Press Photographers Association of New York

Eisenhower which won the William Randolph Hearst Memorial Award (a $500 bond) as best of show for Bert Brandt of United Press Newspictures. The complete set of 40 winners will go on exhibit for five days starting February 12 as part of the National Photo Show in Manhattan's Grand Central Palace.

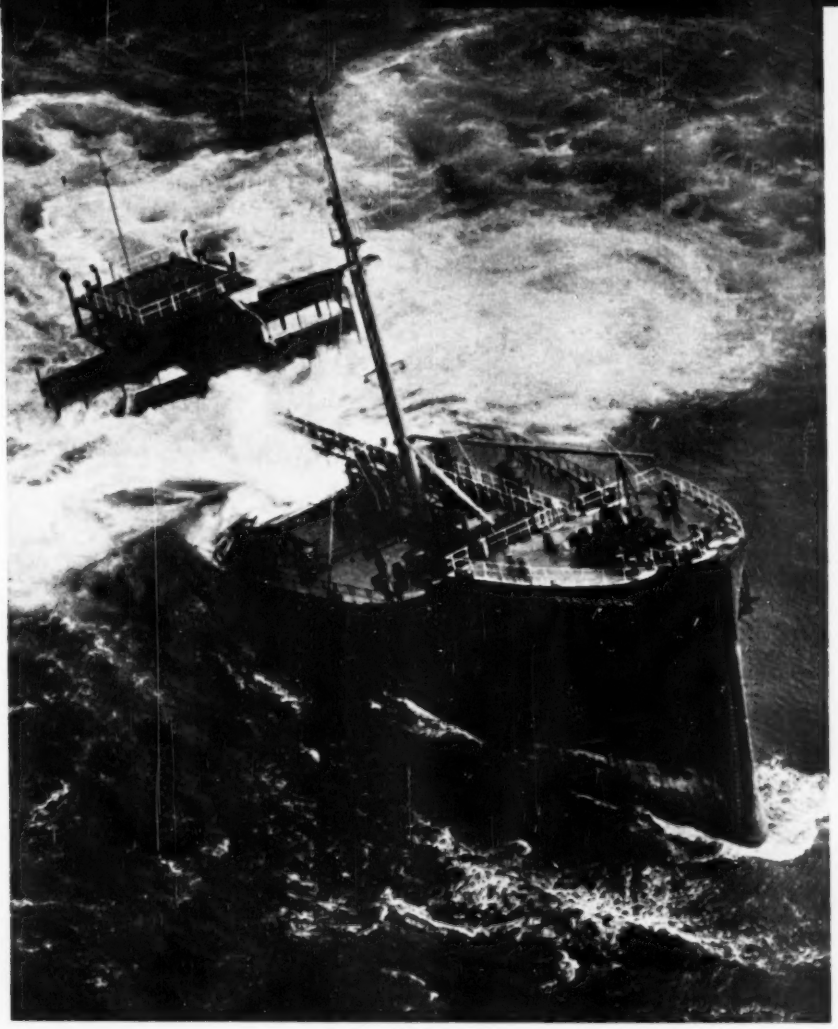
The judges spent hours of intensive work in the apartment of host and fellow judge, B. G. Davis, president of Ziff-Davis Publishing Co. (publishers of PHOTOGRAPHY). But the hard work was made more pleasant by the presence of a glamorous female—MGM's sultry-eyed Rita Gam, stopping over in New York en route to Morocco for a new picture.

As usual, the judges were split into several panels for the preliminary judging. Seeding the huge stacks of prints in the feature and pictorial classes were Davis, Miss Gam, Sam Day, managing editor of the *New York Journal-American;* Everett Walker, managing editor of the *New York Herald Tribune,* and Ben Wickersham, picture editor of *Look* magazine.

Judging the spot news and speed-light sports classes were Robert Shand, managing editor of the New York *Daily News;* Hinson Stiles, managing editor of the New York *Daily Mirror,* and Robert Tieken, picture editor of the Associated Press. Presiding over the sports and animals classes (animals was a new grouping this year) were Harold Blumenfeld, picture editor of United Press Newspictures; Ray Mackland, picture editor of *Life* magazine, and Thomas W. Schroth, managing

Feature and pictorial classes were judged by Wickersham, Rita Gam, Davis, Day, and Walker.

Stiles, Tieken, and Shand judged the spot news and speed-light sports classes.



←

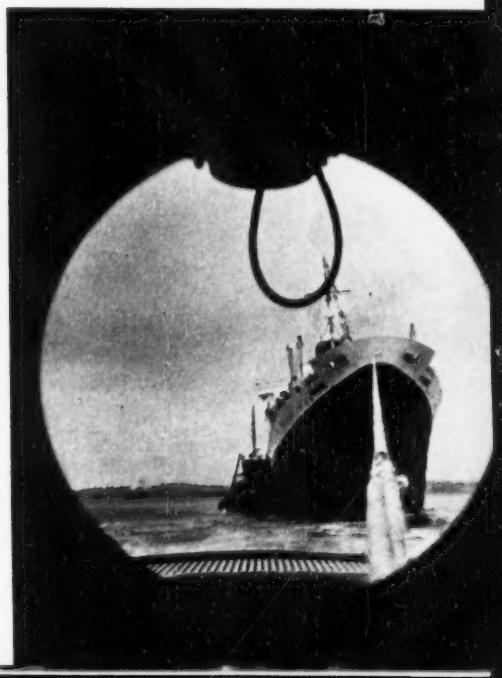
Split in half by a raging winter storm, the tanker Pendleton wallows in cruel sea off Cape Cod. Gordon Rynders, the *Daily News*, won an honorable mention in spot news with his aerial view of the wreck. Below, Meyer Liebowitz of *The New York Times* aimed his camera through a porthole for unusual shot of French liner *Flandre*. The floundering *Flandre* was towed by tugs after breaking down in New York harbor on her maiden trip. Second prize in pictorial.

←

A soft touch for bums, gangster boss Frank Costello peels off a few bills to panhandler on steps of federal courthouse during a recess in his contempt of Congress trial. Dan McElleney of the *Daily Mirror* placed first in general news with this picture.

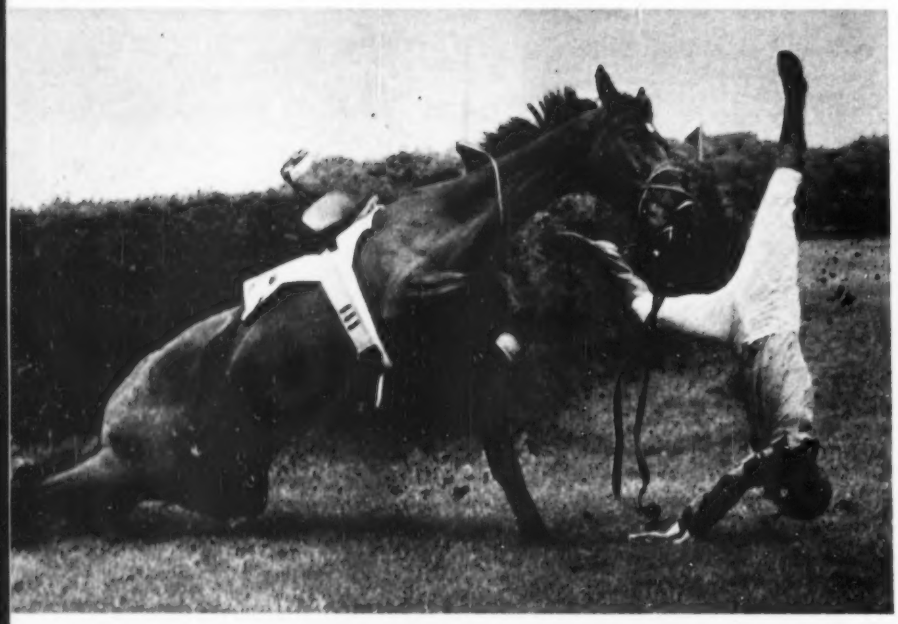
→

Tulip-sniffing kitty rated top prize in animals, a new grouping in this year's contest. Photographer was Irving Tuttle, *Newark Evening News*, who used two No. 5 flashbulbs and unlimited patience to catch amusing pose. Exposure: 1/200 second at *f*/16.



editor of the *Brooklyn Eagle*. Portrait and general news categories were evaluated by Paul Sann, executive editor of the *New York Post;* John Randolph, picture editor of *The New York Times;* Cavio Sileo, assignment editor of International News Photos, and Russell Countryman, picture editor of *Newsweek*. Lending technical assistance, but not taking part in the judging was a PPANY committee headed by George Torrie, of the *Daily News*.

When the panels of judges had whittled down their selections to 15 in each group, all assembled for a "plenary" session to (*Continued on page* 114)



→

Boxer in a sweat: beads of perspiration ooze from towel-swathed face of Cuba's Kid Gavilan working off excess poundage before fight with Gil Turner. Photographer was Sam Schulman of International News Photos who won second in portraits.

←

Jockey on his head was frozen at 1/500 second by John Rooney, Associated Press, who took an honorable mention in sports for this precisely-timed action picture. Jockey and horse both walked away from the crash at Belmont Park's last hurdle.

←

A right to the jaw by the high-powered fist of Rocky Marciano twists the face of champion Joe Walcott into a hideous mask. Herbert Scharfman of International News Photos took first prize in speedlight sports division for this shot.

Wild with glee, catcher Yogi Berra jumps on relief pitcher Bob Kuzava who has just polished off the die-hard Dodgers to give the Yanks another World Series. Leapfrog picture won top prize in sports and the Izzy Kaplan award for *Mirror's* Art Abfier.

Sports and animals were judged by Schroth, Blumenfeld, and Mackland.

1 *Robert G. Koropp*

PICTURES FROM

WHERE do you find good pictures? The answer is—everywhere, if you have a quick and adventurous eye. The commonplace as well as the bizarre furnish raw material for exciting shots. Here are four pages of photographs in color and black-and-white from people who discovered lively pictures all around them: spring flowers in a shop window, laughing girls on a sunlit beach, bridal attendants outside a church, kids, cowboys, and ballet dancers. Watch for scenes like this in your own life. You can find them if you look; you can capture them if you're alert.—

Photographs accepted for Pictures From Our Readers *are paid for at the rate of $40 per color shot and $15 per black-and-white.*

2 *Howard O. Weber Jr.*

1 Extreme horizontal cropping emphasizes long sweep of California beach. Robert G. Koropp of Winnetka, Ill., made the shot with a 4x5 Speed Graphic. His exposure, on Super-XX film, was 1/50 sec at *f*/4.5.

2 Low angle was used by Howard O. Weber Jr. of Springfield, Ohio, to provide bare sky as background for beach portrait. His Rolleiflex was loaded with Super-XX film. Sunlight exposure: 1/200 sec at *f*/16.

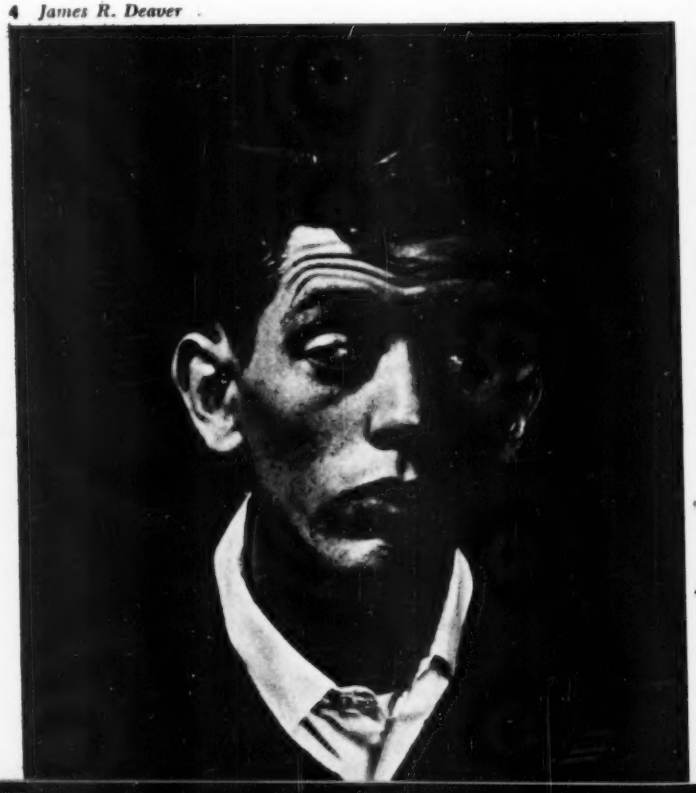
3 High angle eliminates unwanted background detail in another beach picture of a pretty girl. Louis Nemeth of New York City used a 4x5 Speed Graphic with *f*/4.7 Ektar lens. Exposure: 1/200 sec at *f*/16.

4 Low-key lighting from two floodlamps dramatizes portrait by James R. Deaver of Athens, Ohio. He used a Korona View camera equipped with Ilex lens, exposed high-speed pan film for 1/10 sec at *f*/8.

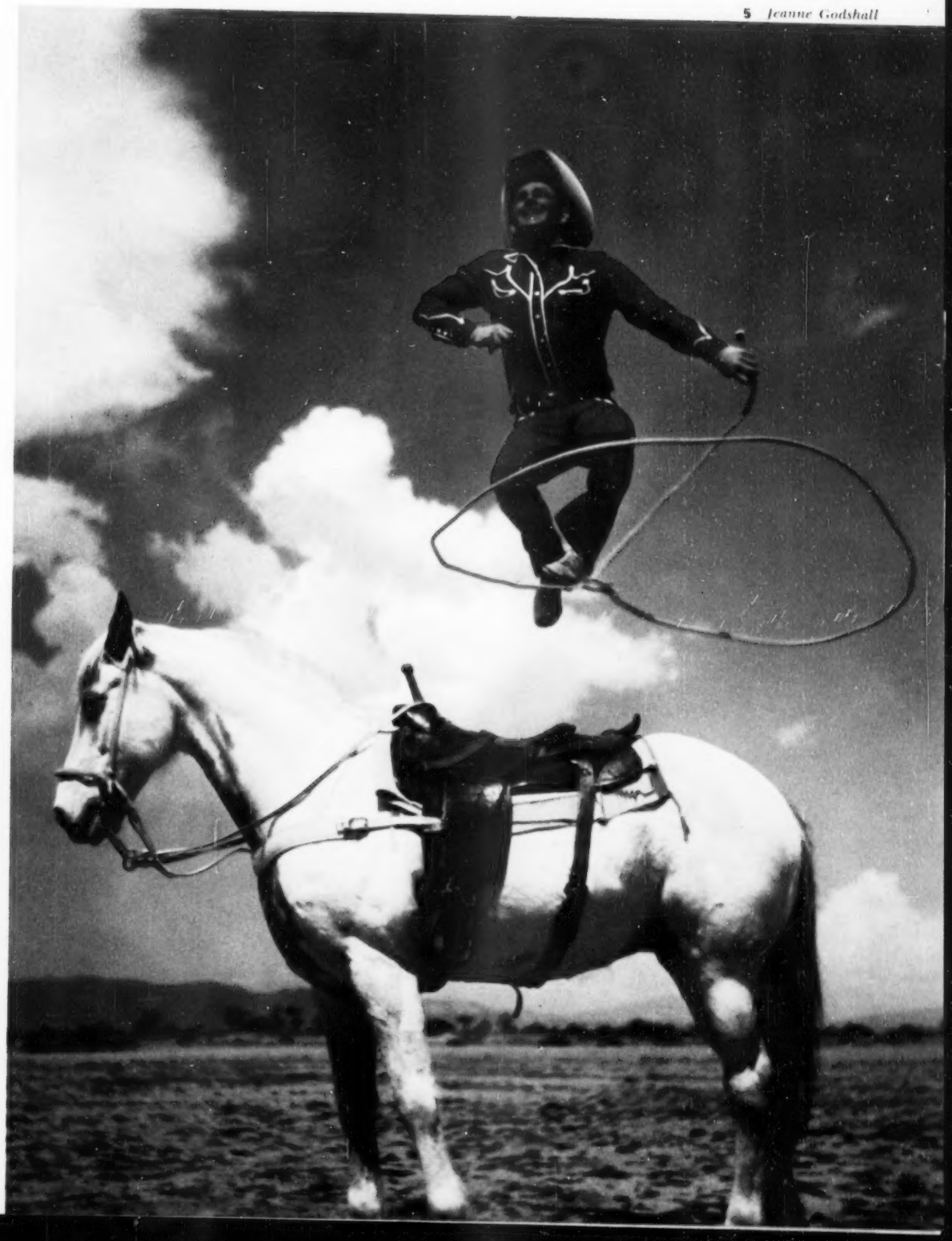
5 Jeanne Godshall of Victorville, Calif., an expert trick rider herself, caught this rope-skipping cowboy with a shutter speed of 1/500 sec. She used a Rolleiflex with *f*/3.5 lens wide open. Ektachrome film.

Louis Nemeth 3

4 *James R. Deaver*



OUR READERS



5 *Jeanne Godshall*

6 *Bill Lewis*

7 *Robert Christie*

Richard Gee 8

9 *Angel de Moya*

10 *Norman Rothschild*

11 *Al Francekevich*

6 Candid shot of Greenwich Village fruit stand was made by Bill Lewis of New York City who used a Leica with an *f*/3.5 Elmar lens. He exposed Kodachrome Daylight film by natural light; 1/40 sec at *f*/6.3.

7 Robert Christie of New York City found Easter flowers in a shop window. He caught the subtle pastel colors on Kodachrome Daylight film. Exposure, for hazy light, was 1/60 sec at *f*/6.3. He used a Leica.

8 Monday scene was recorded by Richard Gee, Liverpool, England, who saw two boys playing with their mother's wash. Strong sidelight adds three-dimensional feeling. Kodachrome Daylight film; 1/60 sec, *f*/6.3.

9 Angel de Moya of Havana, Cuba, photographed ballet students in Chicago by the light from three photofloods—two on subject and one on background. Kodachrome Type A film. Exposure: 1/60 sec at *f*/5.6.

10 Wild-eyed merry-go-round stallion was shot close up by Norman Rothschild, Brooklyn, N. Y. He used a Rolleiflex with 35-mm adapter back. Natural-light exposure; Ansco Color; 1/50 sec at *f*/6.3.

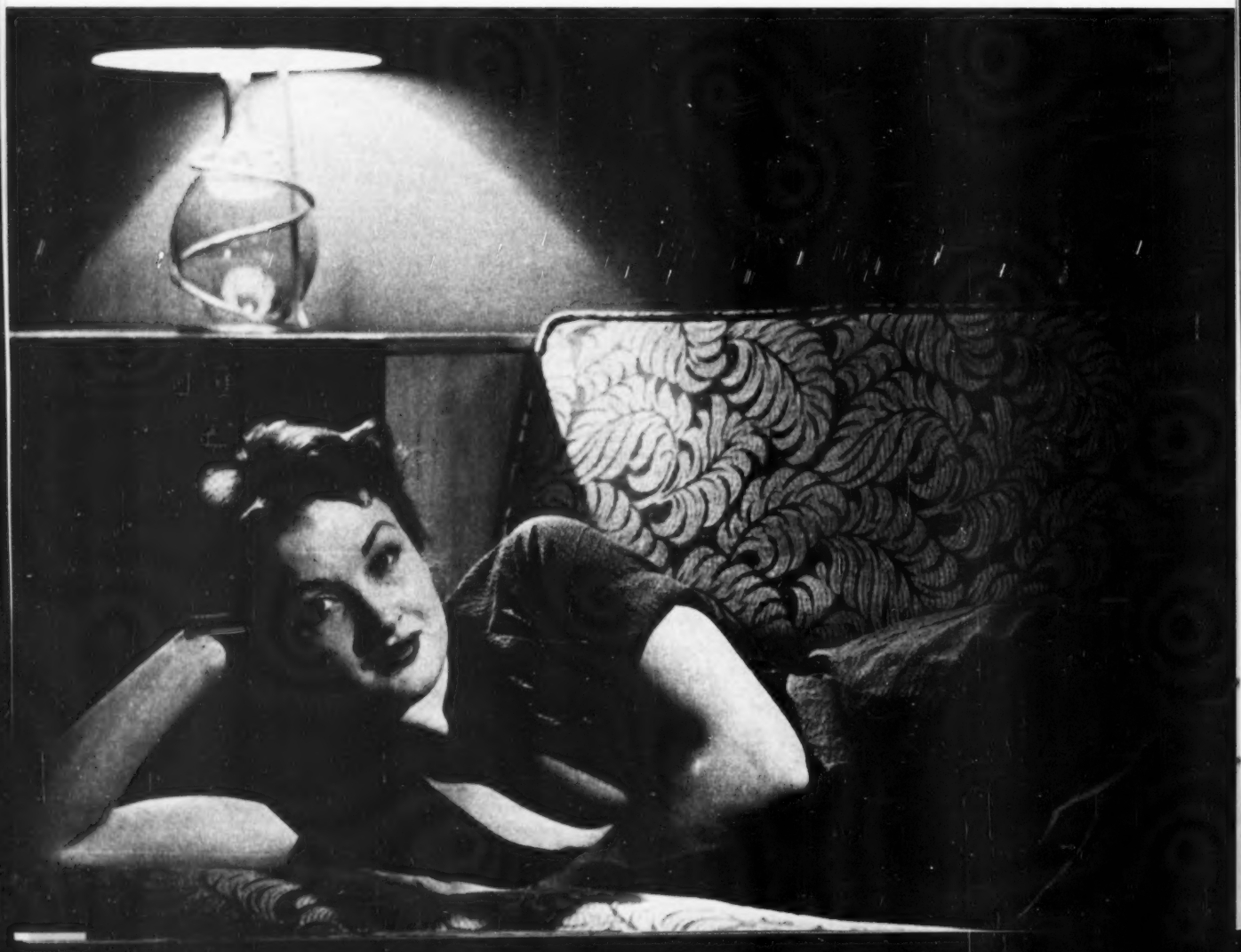
11 Al Francekevich, Brooklyn, N.Y., made this charming picture of a flower girl and ring bearer waiting for the wedding party. He shot by hazy light with his Rolleiflex set at 1/50 sec and *f*/8. Film was Plus-X.

LOW-KEY LIGHTING

Here's a guide to pictures on the exciting side. Herb Giles shows you how to create mood, add impact, and achieve eye-stopping effects with flash, flood, and spots

PHOTOGRAPHS By HERB GILES

Actors in photographs are from CBS Radio: *The FBI in Peace and War*



FOR DRAMA

IN STILLS

IN MOVIES

ARE YOU LOOKING for fresh ideas in lighting? Do you want to improve your indoor stills and movies? Would you like to duplicate the effects seen on TV and in magazine illustrations? Try low-key lighting—illumination that leaves most of the scene dark while throwing a few brilliant highlights on the subject.

Roughly speaking, a low-key picture is one in which the shadows are predominant over the highlights and middle tones. Heavy shadows, and the contrast between them and bright areas, convey a feeling of drama, strength, and intensity. Of course you must pay for this effect by sacrificing some shadow detail.

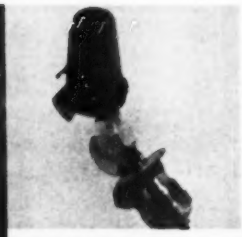
Existing-light photography often produces low-key pictures. But you can achieve similar results—and enjoy full control over the light source—with flashbulbs, floodlamps, or spotlights. The setups can be simple or elaborate, a single spotlight or a team of flashbulbs placed at strategic points. Magazine photographer Herb Giles demonstrates a few of the more useful setups on this and the following pages. His camera was a Rolleiflex and he used Super-XX film in each case. No doubt you'll be able to think up many more variations, both for home movies and still photography.

Low-key lighting has great impact, but it should be used in moderation. If overdone, it lapses into melodrama and soon becomes tiresome. Try it from time to time as a refreshing change in pace from conventional lighting; it will add drama to your pictures.—

SIMULATED ROOM LIGHT is created simply by placing one No. 1 photoflood in the table lamp for effect only; model is lighted by a 200-watt baby spot hung high and to the right on wall molding. A 1/4-20 bolt screws into tripod socket of spotlight and holds it to one end of a two-foot 1x1½-inch board. The board has a molding hook on top end, rubber feet on bottom to protect wall.

continued

EYELIGHT mounted on camera adds bright catchlights to model's eyes and lips. Main light here is a baby spot high-front for "glamour" lighting. Eyelight is a 60-watt frosted tungsten bulb in reflector. A short gooseneck connects it to a flashgun clamp. The eyelight must be placed as close as possible to the lens. Used in TV, it's also a helpful device for home movies and still portrait work.

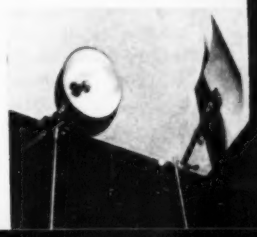


MATCH FLARE is simulated by one No. 5 flashbulb on extension cupped in hands of model. Bulb's brightness is reduced by green plastic beverage cup taped to cardboard disk on plug at end of extension cord. The cord itself is concealed in shadows. A second synchronized No. 5 bulb throws light high on background. Instead of flashbulb, a flashlight or several matches could have been used to create a like effect.

PHONE BOOTH lighting comes from a single No. 5 flashbulb on an extension cord without reflector. Piece of coat hanger wrapped around plug and bent as a hook enabled Giles to hang bulb on grid inside booth. Extension cord is taped to side of booth and run through slightly-ajar door. Camera angle was carefully chosen so that neither the cord nor bulb would show. For greater detail outside booth, use a fill-in flash.

NIGHT EFFECT in broad daylight is achieved by giving at least two stops less than normal daylight exposure so that outside scene goes dark. "Room light" is supplied by a No. 5 bulb in reflector on a stand high and to left. Second stand with a right-angle clamp holds a piece of shirt cardboard that prevents flash from falling on window bars. Exposure, on Super-XX film, was f/11 at 1/250 sec; flashbulb at six feet.

continued

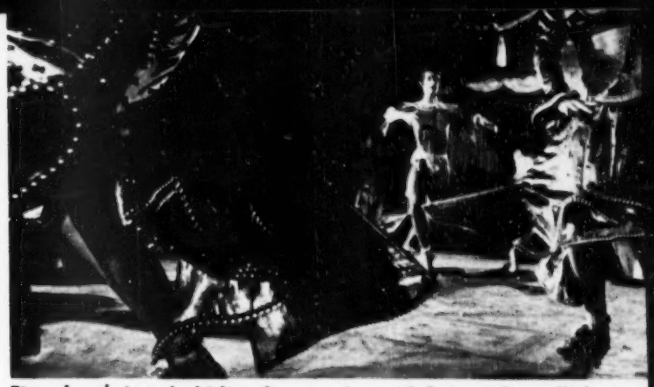


DRAMATIC ROOM LIGHT for movies or stills can be achieved with floodlamps placed at various points. Giles here used an RFL2 reflector-type photoflood attached to leg of lamp table with a "gator" clamp and tilted up to throw light on man 9 feet away. The doorway in back of him was lighted by a second RFL2 out of camera's view. A 200-watt baby spotlight placed high and to the left created highlights on girl's hair.

FLASHLIGHT is easily imitated by a synchronized two-flashbulb setup. A No. 5 bulb in reflector at the end of extension cord is held concealed in the model's left hand; his right holds the flashlight. (The wire itself is hidden by his body and the steps.) Second No. 5 bulb is placed high and off camera to illuminate man's right side. Many of these synchronized flash setups could be duplicated by open flash.

A SIMPLE TECHNIQUE is to replace tungsten bulbs with photofloods in existing overhead fixtures, floor lamps, table lamps, etc. Stairway scene is lighted by a No. 2 photoflood placed in ceiling fixture on the floor above. Reflected as well as direct light illuminates the two figures; no fill-in light is needed if surrounding walls and ceiling are light. Try this method for home movies on black-and-white film.

MULTIPLE FLASH SETUP creates dramatic street lighting. Giles used open flash technique: he fired one SM bulb on camera as fill-in light; assistant around the corner immediately fired a powerful No. 2 flashbulb directed at the houses on far side of street, and a No. 5 pointed at the two figures to provide backlight. Giles then closed the shutter. A portable battery case powered the assistant's hand-held bulbs.



Floor-Level shot of whirling dancers taken with Leica and speedlights.

SPEEDLIGHTS AT THE LIDO

Carl Perutz tells how he stopped a fast-moving Paris show

THE LIDO, one of Paris' biggest, most flamboyant night clubs, presented several lighting problems when I did a special assignment there last year. I was to photograph the show (which is presented on a long, narrow stage) during an actual performance, and decided that electronic flash would give me maximum light, and minimum annoyance to the room full of customers. Three units, with two lights running from each, were hung from ceiling beams and light fixtures by "C" clamps and string, and the power packs hidden under tables. Two of the units were Strobo Research putting out about 200 watt seconds and the third was an old Parker & Young unit giving about 225 watt seconds. The photo-electric cells (slave units) were so positioned that any one unit would simultaneously fire the other two, allowing me to work from several different locations.

The action pictures appearing on these pages were taken with a Leica III-F with an extreme wide-angle lens of 28-mm focal length. Exposures were at f/11 on Ilford HP3 film, with a speed setting of 1/30 second (the only point at which the curtain is fully open) which gave stopped-action and sharp detail down the full length of the stage.—▶

Three units of electronic flash with combined speed of 1/5000 second were fired simultaneously to freeze action on stage of Paris' Lido Club, left. Perutz made low-angle shot with Leica and 28-mm wide-angle lens stopped to f/11; shutter speed, 1/30 sec.

Backstage, "mannikins" were photographed, right, with portable Heiland speedlight unit as main light source. Silhouette and semi-silhouette effect was produced by bouncing light off wall to right and in front of girls at dressing room mirror.

Culver Service

NICE WORK IF YOU

HERE, FOR THE FIRST TIME ANYWHERE, ARE SOME HITHERTO UNREVEALED FACTS ABOUT THE HOLLYWOOD CAMERAMAN'S GLAMOROUS, WELL-PAID PROFESSION

IF YOU WERE a Hollywood cameraman—if you made your living shooting the stars from behind the big glass-eyed film-devouring monster called a movie camera—what would life be like? Could you get rich quick, or just make a comfortable living? Is the job as glamorous as it sounds? What kind of prestige and security go with it? And (maybe this question should be answered first) how many men like you would there be in the business, and how did you get that way? Here are some interesting inside facts, many of them now published for the first time.

The first thing that strikes you when you look at an ace cinematographer's career is that he's been in it a long time. This is a line of work in which the "younger generation" has 20 years' experience, and in which a "veteran" is a man who's been grinding out movies since Hollywood was open country. Several of the top cameramen still working full-time have 35 to 40 years on the job.

As in most other fields in which there is heavy competition for jobs, the union regulates cameramen's categories strictly. Top man is the Director of Photography, whose name appears in the screen credits, and who has tremendous responsibilities in film-making, covering far more than camera operation. (As a matter of fact, he is forbidden by the union even to touch the camera!) It is he who determines all lighting effects; the electricians merely carry out his instructions. He must co-ordinate the work of

Yesterday's camera crew: Left, C. B. DeMille, in beret and puttees, poses on set of an early film. At camera is Alvin Wyckoff. Below, Billy Bitzer films classic *Birth of a Nation* for D. W. Griffith.

CAN GET IT

By JOSEPH V. MASCELLI

HERE'S HOW A CAMERA CREW WORKS TOGETHER UNDER THE HEAD CAMERAMAN

Director of Photography Bill Daniels, behind camera, confers with Raoul Walsh, director, on *Glory Alley* set. Union rules forbid him to touch camera.

Head gaffer (electrician) Jim James takes light meter reading from back of actor Kurt Kasznar. All such details are carefully checked, leaving nothing to chance.

First assistant cameraman Matt Kluznic measures distance from camera to subject for close-up shot. Matt has been in film-making business more than 27 years.

Kluznic sits on dolly under camera boom and manipulates remote-control focus-changer as lens approaches subject. Electronic gadgets like this help simplify job.

Operator Bill Dodds, also 27 years in films, does actual shooting of scene set up by Daniels. Contrast this elaborate equipment with the simple camera of 1914.

the camera crew of four to six men, and work with the director of the picture to preserve unity throughout the shooting schedule. He is paid a union minimum weekly salary of $479.42—but sometimes gets as much as $1,500 a week.

Assisting the Director of Photography is the second cameraman, better known as the operating cameraman. He does the actual shooting, and gets a union minimum of $243.18 a week. He, in turn, has a helper: the first assistant cameraman, at a weekly minimum of $156.78. A second assistant cameraman completes the crew, drawing $134.16. This second assistant is the man who holds the slate bearing identifying marks at the beginning of each scene. His is the face on the cutting room floor; he's in every scene, but he never appears on the screen.

On Technicolor productions two color technicians are added, at $210.86 each. Every studio also has a film loader who gets $2.05½ an hour, though the union permits the second assistant to load film too. The film loader saves time and insures uniformity in receiving and disbursing film in the loading room. He also inventories camera equipment, and is one of the few studio workers who can graduate to the camera crew itself.

You've often seen the initials A. S. C. after a photographer's name on the screen. Until recently it was necessary for every Director of Photography to be a member of the American Society of Cinematographers—by invitation only—but at present it is simply an honorary group. It is mandatory, however, for the entire camera crew, from Director of Photography to film loaders, including portrait and "set still" photographers, to belong to the International Alliance of Theatrical Stage Employees, Cameramen's Local 659.

Technically speaking, it would be possible to work in the studios without belonging to the union, but under present conditions it couldn't happen. The studio can hire a non-union worker *after* every available union man is gainfully employed. About 750 men are on union rolls, with an average of 700 being employed in both television and movie production. Of these, 245 are Directors of Photography, about 285 are operating and assistant cameramen, and the remainder are still and portrait photographers.

Of the 150 actively employed Directors of Photography, about 60 are under contract for approximately $650 a week, and shoot most of Hollywood's pictures—about 400 to 425 major studio and independent productions. Others, like James Wong Howe, would rather free-lance, command a higher salary, and choose the kind and number of pictures they like. The rest simply shoot a picture whenever they get the opportunity. This gives a fair picture of the career of a Hollywood cinematographer, and of the chances of an outsider breaking into it.

Let's look again at that bulging pay envelope of the Director of Photography in the light of the work he has to do for it. Let's say he's a top man and gets $1,000 a week for ten weeks to film a big million-dollar "A" picture. He's earning a mere $10,000 (before taxes!) in a hectically short period, under tremendous pressure, working long hours try-

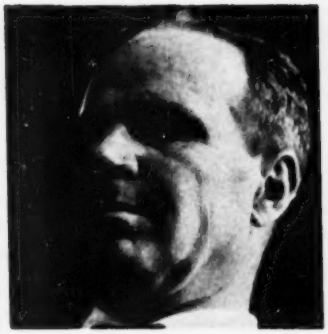
Photographs on these pages by Louis Hochman

George Barnes
James Wong Howe

Bill Daniels
Charles Lang, Jr.

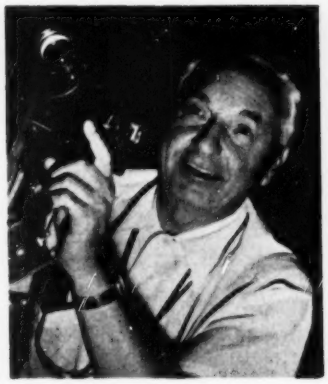
Milton Krasner
Joseph LaShelle

Karl Freund
John Seitz



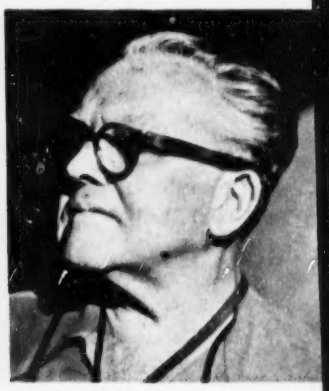
HERE ARE NAMES AND FACES OF SOME OF THE NATION'S BEST MOVIECAMERA MEN

Russell Metty
Leon Shamroy

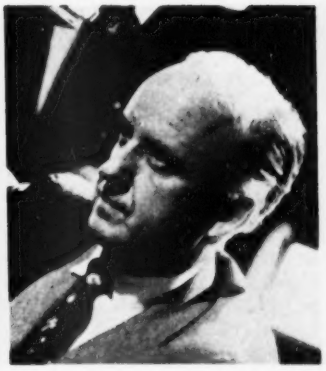


Hal Mohr
Harry Stradling

Frank Planer
Robert Surtees



Charles Rosher
Gregg Toland



Representative top men in Hollywood cinematography, these 16 have a cumulative total of nearly 500 years of movie-making experience. Most are still working at salaries as high as $1500 a week. Notable exception is Gregg Toland, who died five years ago at the peak of his career.

Culver Service

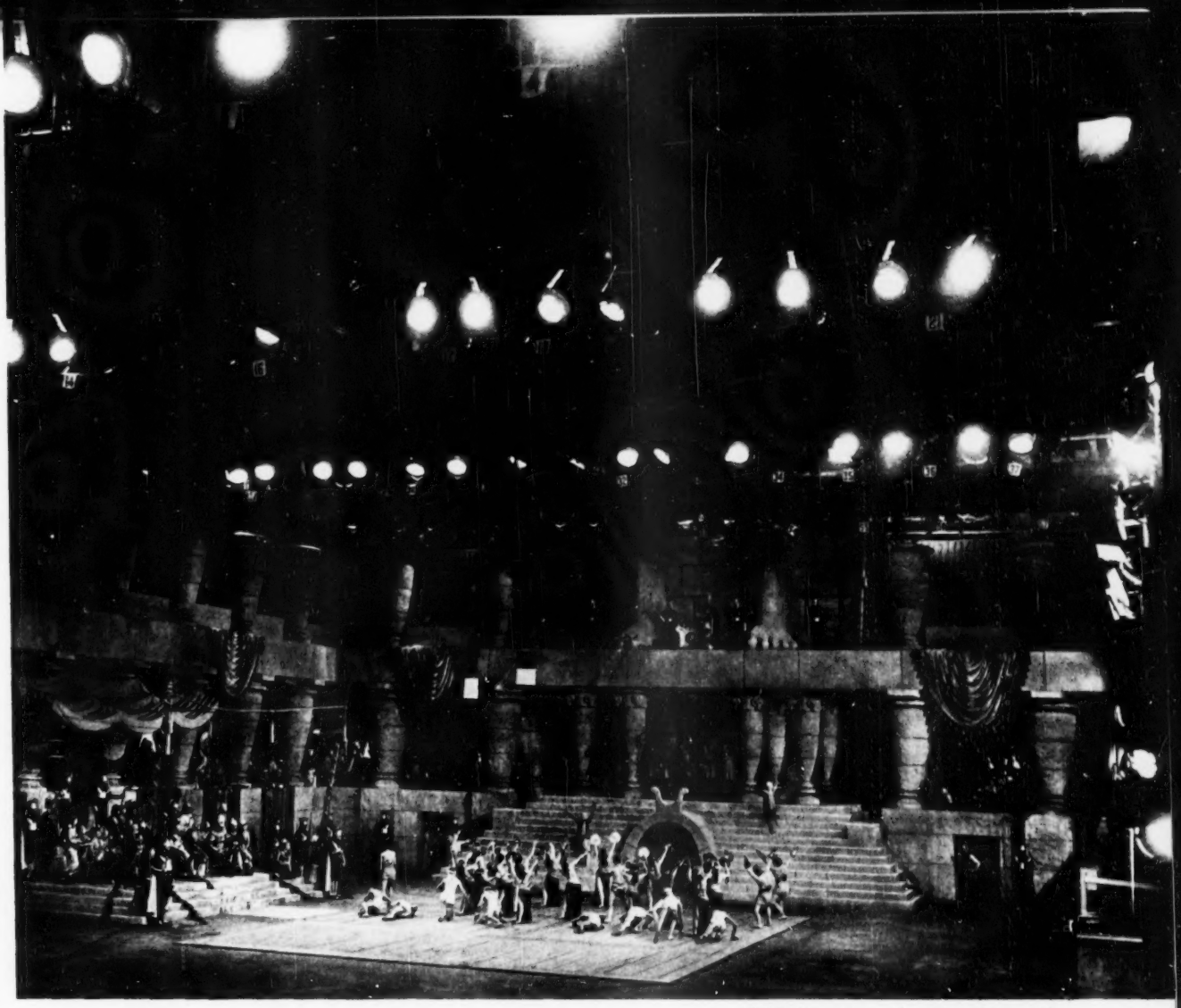
HERE'S HOW THEY USED TO SHOOT A "SPECTACLE"

ing to translate everyone's abstract ideas and generalities into concrete images. He is the first one on the set in the morning, and the hardest-working member of the crew. Everything hinges on him: getting scenes shot on schedule, keeping within the budget, seeing that everything runs smoothly with the actors, sets, wardrobes, and a hundred minor details. He's the only man who doesn't sit around between takes playing gin rummy; he must supervise the next set-up without delay. The Director of Photography actually sets the pace of the production. Everyone, including the director of the picture, must wait until his camera and lights are ready. At the end of the day, when everyone else goes home, he stays and views the previous day's rush prints. He must also supervise the filming of endless tests, both before and during production. To borrow a phrase from Harry Truman, he has become a four-ulcer man on a six-ulcer job!

It wasn't always this way. In the old days the camera crew was one man, who not only shot the picture but developed it, cut and edited it, and supervised the making of release prints. No task, from shooting stills with a borrowed folding camera to sweeping up the studio, was beneath his dignity. He was actually the only technician of any importance on the set, and everyone looked to him for answers; he had the last word as to what could and could not be done. There was actually a short interval in 1915 when cameramen on the old Universal lot had full authority over all phases of production.

Many old-time film factories employed only one or two cameramen, though they kept eight or ten companies shooting simultaneously. The "master cameraman," prototype of the Director of Photography, would move from set to set (all lined up under one roof in those pre-sound days) adjusting the rigidly-fixed cameras and reloading them when they ran out of film. A "crank turner" stood by—a human motor—ready to grind whenever the director yelled, "Shoot!" Today, a second-rate cameraman is still referred to as a crank-turner.

Deservedly the most famous of the early cinematographers was Billy Bitzer, who filmed the great *Birth of a Nation* for David Wark Griffith. This picture, released in 1915, proved for the first time, even to the severest critics, that motion pictures were a potential art



HERE'S HOW THEY DO IT TODAY

form and must be dealt with as such.

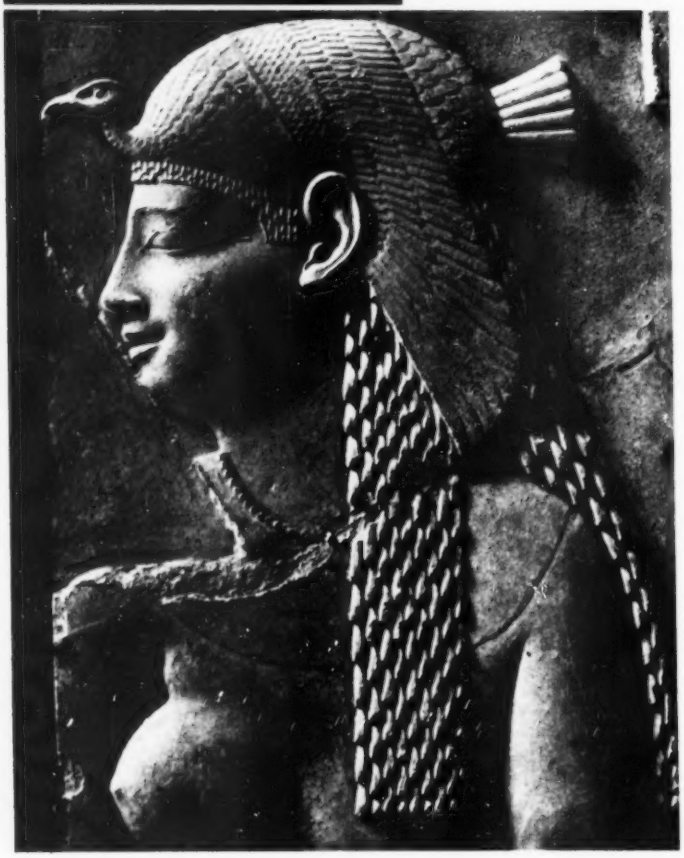
Spanning the years between Griffith and today are men like Charles Rosher, who began filming newsreels in 1908 and is still grinding out top features like *Showboat* and *Scaramouche*. These are the men who are a living history of the movie industry. Rosher had been a portrait photographer in London, and had made pictures of the royal families and nobility of Europe. He was hired by the old Nestor Studio in 1911 when he met the production manager's challenge to "thread that camera!" If he could thread a movie camera, he must be a cameraman—it was as simple as that. He went on to shoot all of Mary Pickford's pictures for Famous Players, and is credited with being the first to use artificial light outdoors, as booster illumination, and he was the first cameraman to use arc spotlights for key lighting.

Karl Freund is typical of the great cinematographers imported from Europe who have contributed so much to Hollywood motion pictures. He began with UFA in Germany over 30 years ago. His first great innovation was continuous filming with a moving camera that trucked, dollied, and swung from a crane, to record the now-classic *The Last Laugh* in 1924. The mobility of modern camera work, with its fluid filming, stems from that famous production which startled Hollywood and gave birth to a new style of photography emphasizing movement and unique camera angles. Freund later made *Berlin, Symphony of a City*, the first abstract documentary made without actors, and the forerunner of (*Continued on page* 115)

Thirty-five years of motion-picture history lie between the street fighting scene from D. W. Griffith's *Birth of a Nation* and the Biblical panorama from Cecil B. DeMille's *Samson and Delilah*. In 1914 Griffith was at the mercy of weather and light conditions when he made his outdoor scenes. By 1949 it had become more economical to build huge sound stages, big enough to hold whole "cities," rather than suffer costly delays in production schedules due to uncertainty of light and weather. Faster films and better cameras made it possible to shoot under artificial light. Even today, of course, many scenes —like this Civil War street fight—would have to be shot outdoors because of the amount of ground they cover. But unquestionably the pagan temple panorama above would have been filmed under open sky a generation earlier. These two pictures are examples of the best work of two of the movie industry's greatest cameramen; Billy Bitzer shot the epic of the War Between the States for Griffith, and George Barnes was Director of Photography for Paramount's Technicolor extravaganza of the Old Testament strong-man.

For portraits supplementary lenses are practically indispensable, especially with inexpensive cameras which do not permit you to get close enough for large head image. Top picture shows maximum image with normal lens, lower one demonstrates close-up effect you can get with plus-1 diopter slip-on lens.

GET



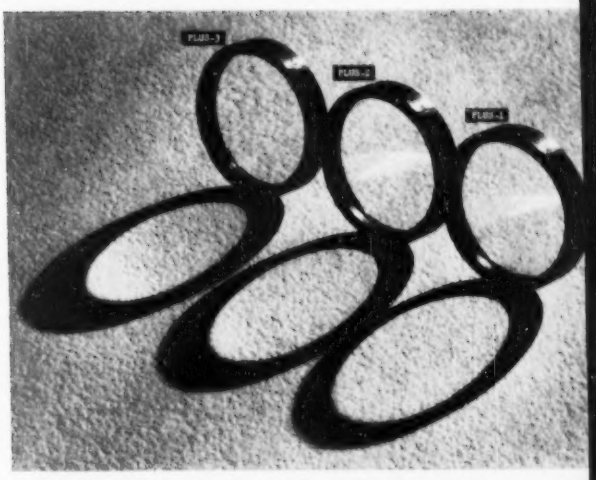
Art objects are best photographed as close up as possible. Normal lens used for shot, top right, included too much area of museum exhibit case. Plus-2 diopter slipped over lens allowed photographer to get close to one tablet for large, detailed image, right.

View-type cameras with double-extension bellows permit close-ups like nature shot below without supplementary lens. But a plus-3 diopter slipped over normal lens with same equipment, produced larger image at right.

CLOSER

WITH SUPPLEMENTARY LENSES

By JOSEPH FOLDES
Illustrations by the author



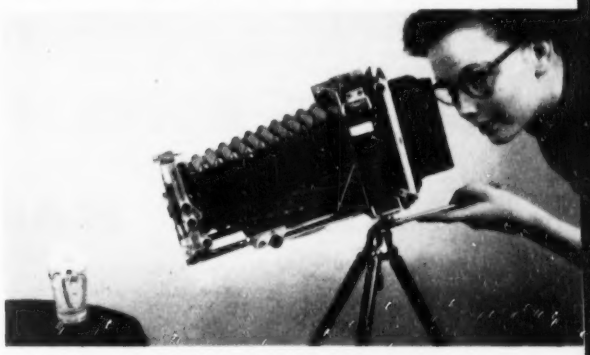
Close-up lenses are inexpensive and easy to use. They come in three powers, referred to as plus-1, plus-2 and plus-3 diopters, and when slipped over normal lens permit camera to move closer to subject thus producing larger than normal image on negative. They are especially useful in portraiture.

CAMERA'S AREN'T TIMID but too many amateur photographers aren't bold enough to make full use of them. One of photography's most fascinating abilities is to move in close on subject matter to reveal its minute detail and texture. No matter what kind of camera you have, you can get in close. Yes, even if it's a fixed-focus box, it is not only possible but quite simple to get close enough for a large negative image. All you need is a simple "positive" supplementary lens to slip over the normal lens of your camera.

With most cameras you can't get closer than three to six feet from an object without getting an out-of-focus image. That's an inherent limitation of lens design. No lens has yet achieved the miracle of universal focus. All require optical correction of one degree or another for extreme close-ups. That's where supplementary lenses, sometimes called "portrait" lenses, come in. Slipped over your camera's lens they bring a whole new world within range.

These supplementary lenses are extremely simple to use, are quite inexpensive (they usually sell for under $2 each) and are available in three powers, rated in diopters. They are made to fit most cameras, with or without the aid of adapters. These lenses permit you to move closer to your subject than your normal lens would allow and thus fill more of the negative area with a larger image of the subject. Each diopter rating, beginning with plus-1, allows you to come closer to your subject. The exact lens-to-subject distance for each camera lens is specified by the manufacturer in the instruction sheet.

When using these lenses the normal focusing characteristics of your camera lens are changed. The focusing scale no longer obtains. You now have to focus by accurately measuring the correct distance for the diopter lens you are using. The simplest way is with a tape measure. Of course, if you have a camera with groundglass focusing screen you can see the effect of the lens and then focus as usual by inspection. With a twin-lens reflex camera it is necessary either to buy two supplementary lenses or focus first with the supplementary over the top (*Continued on page* 112)

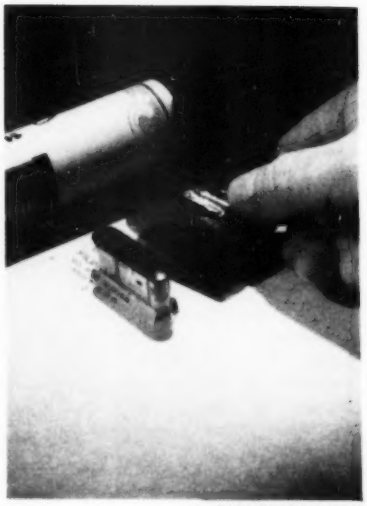


Focusing is critical in close-up photography, and it usually is best to close down lens to smallest practical stop for maximum depth of field. Focusing with groundglass cameras is done as usual by inspection (above), but for all other "blind" type cameras tape measure method (below) is essential.

With Leudi meter mounted in 8x10 cardboard shield, photographer test-flashes unit for exposure reading. Below, a slit is cut into cardboard shield so meter can be slipped into it. At bottom, blue Cellophane is placed over top of meter to reduce amount of light entering the meter window by exactly two lens stops.

SIMPLE METER FOR ELECTRONIC FLASH

By KENNETH B. MURRAY



A NEW AND UNUSUAL way of determining electronic flash exposures involves the use of an inexpensive extinction-type exposure meter mounted in a sheet of corrugated or regular cardboard. The cost is a little over two dollars—$2.15 for a Leudi #3 meter the only significant expense.

The method outlined below takes advantage of the persistence-of-vision phenomenon which enables us to see motion in movies and television. This is the same illusion that allows us apparently uninterrupted vision when we unconsciously blink our eyelids (the eyes are covered for about $\frac{1}{8}$ second during each blink).

After the meter has been mounted in the center of an 8x10-inches light shield, as illustrated, it is used like any other extinction-type meter. You aim the meter at the scene to be photographed, holding it at a comfortable reading distance. Be sure that the light from the electronic flash does not get behind the cardboard shield where you can see it directly. Now, aiming the speedlight lamp or lamps at the subject as you would for an actual exposure, test-flash the speedlight. You will see some, or possibly all, of the numerals (from 1 to 6) in the long, narrow window slit of the meter illuminated by reflected light from the scene. The brighter the light the lower the order of the first visible number.

To determine the lens opening (*f*-stop) that will produce the correct exposure, merely apply the lowest visible number in the window to the computer scale printed on the outside of the meter. Since

(*Continued on page* 86)

The **Kodak** BULLETIN

Discovering the Kodak Duaflex Camera, *f*/8

Photography is to be enjoyed. If you're all tangled up in technique—if the equipment is wagging the photographer—then here's a camera to cure your ills and restore your hobby!

Photographers are snobbish about cameras. Normally, maybe, you wouldn't think of the Kodak Duaflex Camera, Kodar Model, for your own use. After all, it's priced under $25.

But take another look—a good one—for here's a camera that upsets all the rules.

It's good optically. It's good mechanically. It's good-looking. It handles well. It handles simply. It forestalls errors. It's fun to use. It lets you see what you're getting—*clearly*. It allows you to concentrate on your subject—not on twiddling scales and reading dials. It capably covers a wide range of subjects and situations. Its lens is the right speed for the majority of outdoor and flash shots. Its negatives are sharp and clean. It leaves you free to have a good time, planning and taking pictures—and its very simplicity poses a challenge, brings back the old zest to your hobby.

No matter what cameras you own now—no matter what you paid for them—you'll get more enjoyment from photography if you also own a Kodak Duaflex Camera, Kodar Model, with f/8 lens.

You're In Good Company

Kodak is still in process of discovering how good the Duaflex *f*/8 is—and so are many others.

Here, for example, is a famous photographic illustrator. For his professional work he uses the most expensive cameras and lenses money can buy. For his personal photography—a Kodak Duaflex *f*/8. How did this happen? He *tried* one.

And here's a hobbyist who writes to Kodak—so enthusiastic about the Duaflex *f*/8 that he owns *three* of them! One for each of his three favorite films, Kodak Super-XX, Kodacolor Daylight Type, and Kodacolor Type A.

Why Such Enthusiasm?

It's easy enough to make an inventory of this camera's features (as we've done at the right). But that won't give you the full story. You've got to pick up its capable 14 ounces . . . loop its strap over your neck . . . cradle it in your hands . . . look down into that big, beautiful finder . . . feel the essential *rightness* of each detail. You've got to take a series of pictures, and enjoy the satisfaction of a camera that's full of performance—yet doesn't tie you up in mathematics and scientific problem-solving.

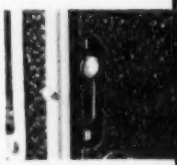
And when you fall in love with this little camera—when you find you're taking a lot more pictures, and having a lot more fun in the taking—don't say you weren't fairly warned.

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

P.S.—*The Kodak Duaflex f/8 makes a grand gift, to start your wife or child in photography. But get two of them at the start—so you won't be borrowing all the time.*

Here's why you'll enjoy a Kodak Duaflex f/8

- Let's start at the top and work down. Here's a big hooded reflex finder, 1⅛ inches square. Look down into it. Brilliant. Crystal-clear. Easy to use if you wear glasses, or if you don't. Every detail of your picture, accurately previewed.

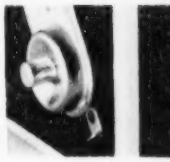


- Next, a shutter without problems. Two settings—one for snapshots, one for longer exposures. Self-setting—no cocking to remember. And adequate speed not only for all quiet subjects, but also for moderate motion if you know your action technique.

- And here, a lens that belongs on a more expensive camera. Not a simple meniscus, not a doublet, but a sharp-cutting three-element objective, amply corrected for all the common optical errors, and for color. Aperture, f/16 to f/8—the biggest slice of *useful* speed on a roll-film camera, plus excellent quality, at a minimum price.

- Built-in flash synchronization, of course.

- And an aperture scale that talks: f/16, bright sun on snow or sand; f/11, bright sun; f/8, hazy sun. No guides to check; data right on the camera.



- And focusing—infinity down to 3½ feet. Any better range, for distant and close work, on any of your more expensive hand cameras?

- Here's a double-exposure prevention device. This, you'd expect only on a precision miniature or a top-price reflex. And you can make *deliberate* double exposures at will.

- And some details. Tripod socket. Camera stands level on a level surface. Body is of metal with tough molded side panels, handsomely leather-grained, and edges metal-bound. Weight, about 14 ounces. And the price, $22.30, including neck strap. Accessory Flash-older, $4.25. Field case, drop front, $2.65. Lens accepts all Series V filters, Portra lenses, etc., with 1⅛-inch adapter ring.

Prices include Federal Tax and are subject to change without notice.

Kodak
TRADE-MARK

The Kodak BULLETIN

Experts' Choices For Fine Prints

WHY does Kodak make so many printing papers—fast, slow, medium—in so many textures, tints, degrees of sheen, contrast grades, weights, and sizes?

To show why, Kodak invited a group of top-rank photographers to tell how they select a specific paper for a specific picture, specific qualities, a specific effect. Here is a review of the first seven selections, published in the 1952 photographic magazines.

Kodak Medalist Paper appeared just about the time most of these photographers made their selections—choosing, of course, from prints which had already achieved notable success. Today, the range of choice would be wider, for *Kodak Medalist*—faster than *Opal*, warmer than *Kodabromide*, flexible in manipulation and contrast control, with four contrast grades and an excellent range of surface choices—has become the new sensation of the Kodak paper family.

BERNARD SILBERSTEIN, FPSA, FRPS, printed "Full Sail" on *Kodak Illustrators' Special Paper*. His exhibition print has appeared in over forty salons, and has never been rejected. He chose *Illustrators'* for its superb tonal scale from clear highlights to richest darks; its lustrous fine-grained "E" surface, which preserves tonal range and richness, and the unique blue tones it yields in his favorite gold-thiourea formula.

ELMORE C. ADAMS, APSA, chose *Kodak Opal Paper G* for "The Brush Burner," which has also appeared in more than forty salons. *Opal's* warmth, its magnificent tonal range and delicacy, its moderate speed and response to manipulation, formed the basis for selection.

KNOW YOUR KODAK PAPERS, FOR KNOWLEDGE SPELLS SUCCESS

These are the papers for fine exhibition enlargements, gift prints, home decoration, and specialized applications—in a range of types to fit your every need:

For fast printing, fine warm-black tones, and great flexibility in manipulation—*Kodak Medalist Paper*.

For rich neutral blacks in a top-speed paper—*Kodabromide Paper*. Five evenly spaced grades and nine combinations of sheen, texture, tint, and weight.

For rich warm blacks in a moderate-speed paper—*Kodak Platino Paper*. Three printing grades.

For widest choice of tint and surface in a paper of utmost tonal quality and adaptability to toning—brown-black *Kodak Opal Paper*. One printing grade.

For Opal quality with twice the speed of Opal—*Kodak Ektalure Paper* G.

For Opal quality in a special fine-grained surface suited equally to exhibition and reproduction—*Kodak Illustrators' Special*.

For photomurals—*Kodak Mural* R.

For transilluminated prints—*Kodak Translite Paper*.

For extra-fast printing and processing—*Kodak Resisto Rapid* N. It's as fast as Kodabromide; and its special base allows washing and drying in ten minutes.

And for contact prints—*Kodak Azo, Velox, Resisto* N, and others. Each Kodak enlarging paper has a contact-paper counterpart, equivalent in type and quality.

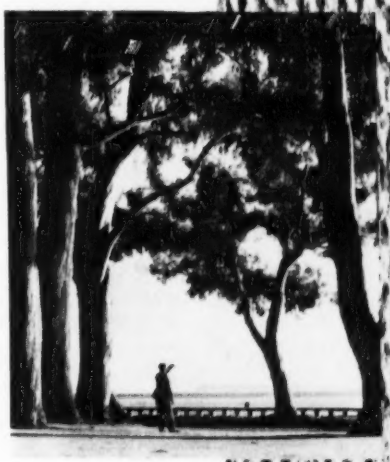
For full details on these fine Kodak papers—tints, surfaces, weights, processing—consult the Data Book on Kodak Papers, and your Kodak dealer.

JOSEF SCHNEIDER, famed illustrator of children, named *four* choices for "Susan"—depending on the purpose of the print. Personal prints for Susan's mother—*Kodak Opal Paper*. Prints for fine reproduction, *Kodak Illustrators' Special* (or *Medalist No. 3* if extra contrast is needed). And where fine display prints are required in quantity, speedy *Kodak Medalist Paper*.

CARL MANSFIELD, M. Photog., FPSA, chose *Kodak Opal G* for his "Minnow Catching"—which has hung in eighty-eight salons from Albany, N. Y., to Zaragoza, Spain. All his exhibition prints (except glossies) are on *Opal*—because it retains so much of the negative's tonal range, offers many surfaces to fit the moods of various pictures, and can readily be toned cool or warm to enhance a pictorial mood.

AXEL BAHNSEN, FPSA, FRPS, desired cool objectivity with maximum detail in "Pattern Motif 283." To get it, he chose glossy *Kodabromide F*; its pure white stock, glass-smooth surface, and cool-to-neutral image tone all contributed to the impression he desired this print to convey.

FRANK HELLER, FRPS, APSA, chose *Kodak Opal G* for "Eucalyptus." The rich darks and delicate light tones of the subject demanded a paper of fullest tone scale, plus the ability to separate closely spaced tones at both ends of the scale—and *Opal* excels on both these counts.



GOTTLIEB HAMPFLER, FPSA, also chose the favorite of all salon papers, *Kodak Opal G*, for "Pennsylvania Snowscape." Its full scale, delicacy of gradation, luminous image quality, and complete reliability were the controlling factors.

EASTMAN KODAK COMPANY
ROCHESTER 4, N. Y.

Kodak
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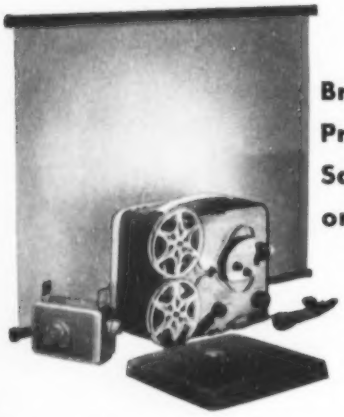
This Year Enjoy Movies, too— with the NEW Brownie MOVIE TEAM

Brownie Movie Projector, only $62.50



Brownie Projection Screen, only $4.50

Brownie Movie Camera, only $42.50

Naturally, you make still pictures. For many purposes nothing can take their place.

But for *living memories* of the people you love, the places you've been, you'll want the special magic of movies. Only movies . . . *color* movies . . . can do them complete justice. For life IS color and action—and life just won't stand still for you or your camera.

This is the year to start. The New Brownie Movie Team . . . camera, projector, screen . . . make the taking and showing of movies really easy . . . easy to do and easy to afford.

Snapshot ease. Making home movies with the Brownie is as simple as making stills . . . in full color or black-and-white . . . indoors or out . . . day or night.

Only $42.50 starts you off. The brilliant new Brownie Movie Camera loads and operates as simply and surely as a box Brownie. One simple setting adjusts for light. Then just aim and press the button . . . and you're making movies.

Snapshot economy. A single roll of 8mm. Kodachrome Film (only $3.95) makes 30-40 average-length, full-color scenes . . . *including processing.* Black-and-white film, only $2.90 a roll!

Economical from start to finish. Now there's a Brownie Movie Projector at $62.50. Trim, talented, it's ready at the flick of a switch to show your movies crisp and bright . . . *stills and reverse action, too* . . . plenty big enough for living-room shows. And *this* new projector is lubricated for life!

There's even a Brownie Projection Screen. A full 30 inches wide, it's yours at the surprisingly low price of only $4.50.

Why not follow the happy example of millions of families? Make *both* stills and movies—now that movies are snapshot easy, snapshot economical. And remember . . . most Kodak dealers offer easy terms!

Prices include Federal Tax where applicable and are subject to change without notice.

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Add indoor movies with the Kodak Photo-Light Bar, $8.75

Kodak
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The Photographic Year

(*Continued from page* 36)

color motion pictures, a matter of considerable interest during the year was a substantial increase in the sharpness of 8-mm Kodachrome pictures. By using a new processing technique which reduces dye spreading and color diffusion in the film, a dramatic improvement is achieved. It is particularly noticed when the exposure is correct, and good camera and projector optics are used.

There are so many good still cameras now available that it is difficult to pick out any one outstanding development for the year. One look at PHOTOGRAPHY's "Giant Directory" for May is enough to stagger the reader. Add to that the reports of the British, German, Dutch and other trade shows of the year, and the sense of discrimination is numbed. All around are new 35-mm cameras, folding roll-film cameras, box types, twin-lens reflexes, single-lens reflexes, speed sequence and stereo cameras, with a great variety of attachments, flash synchonization, shutter speeds and lenses.

An interchangeable twin-lens reflex camera has appeared in which the taking and viewing lenses are mounted in pairs on removable panels—the Rex Reflex. In the military field, the tendency toward small-size combat cameras is significant, and the Army Signal Corps has announced the development of a new 70-mm combat camera of radical design. It is made by Graflex and presumably when it is made generally available it will tend to supplant larger film cameras rather than the 35-mm miniatures.

The excitement over stereoscopic photography is continuing unabated. Quite a variety of 35-mm stereo still cameras are now available, and the principle has been extended to motion-picture cameras, for instance, by Bolex and Nord. All the practical motion-picture systems use Polaroid material in the viewing.

In the theater field, the two most exciting recent stereoscopic developments have been the Telecinema, which was developed for the Festival of Britain 1951, and Cinerama which, although not truly stereoscopic is designed to give a sense of depth, introduced in New York in 1952. The Telecinema employs twin projectors and the Polaroid system involving viewing glasses on the part of the audience. There is still no satisfactory stereo projection system which does not involve the use of viewing devices, with the possible exception of the Russian system of Ivanow, concerning the success of which little is known but which, in any case, would involve the heads of the audience remaining rigidly fixed!

In the amateur motion-picture field, the most significant advance during the year seems to be the application of magnetic sound tracks. This can now be done on existing 16- and 8-mm movies taken at both sound and silent speeds by a number of companies, and manufacturers such as Bell and Howell, Eastman, Ampro, RCA, and Victor make sound projectors for this type of recording. There are several manufacturers who have put out sound projectors in which the magnetic sound recording can actually be done in the projector. Revere has a system called Synchro-Tape, which is a method of combining a silent projector with a synchronized tape recorder.

The selection of lenses by the photographer and the amateur cinematographer must be very bewildering owing to the profusion of high quality lenses now available. Although the use of mirror systems is very old, the long-focus Mirrotel lenses of Wollensak have reawakened interest in their possibilities for distance photography. Dr. Back's Zoomar lenses are the prototypes for variable-focus lenses, and Bolex has brought in a 20-mm to 60-mm variable focus lens for its 16-mm cameras, known as the Pan Cinor, $f/2.8$. A wide range of new lenses is available for the 16-mm field—the Wollensak Raptar series, the Bausch and Lomb Animars, the Kodak Ektars, the Kern-Paillard series for the Bolex cameras, to mention only a few of the more recent ones.

In the field of light sources the simple flashbulb, of course, dominates the field, and large numbers of inexpensive amateur cameras are now provided with flash facilities. The B-C units are gaining in popularity, even for large-scale photography, and punching flash light into shadows outdoors in sunlight by the synchro-sun technique is a well-established and most desirable practice, especially in color work. Portable electronic flash outfits are moving closer to reliability and to replacing to a certain extent the flashbulb, at least in professional photography. In addition to those mentioned in the reports of recent years, we have heard of the Mighty Midget, and the SR Stroboflash II.

A new venture in reflectors is the Lumiclad Reflector supplied on Duaflex Flasholders. It is a virtually nonshatterable reflector made of Tenite, a cellulose ester plastic, and coated by a vacuum process with aluminum which is in turn lacquered for extra protection.

There are a great many filters for a relatively few purposes. The interference filters have been the most novel and important in recent years, but mention should be made of the new and ingenious Polaroid variable filters, in which the colors transmitted by the filters can be selected by overlapping different film filters and turning them in relation to each other.

Twenty years ago, when the modern type of infrared film was introduced, it was pitifully slow, although a great achievement. Aerial photographers had to stall their aircraft in order to permit the required 1/5 second exposure, and infrared motion pictures were out of question. Now, with the new Kodak Spectroscopic Type I-N film, it is possible to make motion pictures in the dark where there is a source of infrared radiation.

Stripping films, in which the layer carrying the developed image can be transferred to another surface, have long been known, particularly in the field of photomechanical reproduction. During the year, two new stripping products were

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in the 1952 GENERAL ELECTRIC HALLOWEEN FLASH PICTURE CONTEST

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D. C. Bostwick, Ardmore, Oklahoma
Chester Chin, Providence, Rhode Island
Jean Elwell, Detroit, Michigan
Lawrence George, Hammond, Indiana
James M. Holcomb, Binghamton, New York
Nicholas Popa, Worthington, Ohio
Fritz Snyder, Erie, Pennsylvania
H. N. Upthegrove, Temple City, Calif.
Lucy Weaverling, Olympia, Washington

NEXT 20 WINNERS

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Garrett Cope, Jackson, Mich.
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Ed. Duda, Los Angeles, Calif.
Thos. F. Flynn, Albany, N. Y.
Jas. Gulino, Howard Beach, N. Y.
G. Taylor, Jackson Hts., N. Y.
H. W. Harman, Wauwatosa, Wis.
L. W. Jenkins, Vallejo, Calif.
V. Kantrowitz, Croton on Hudson, N. Y.
D. Kilpatrick, Detroit, Mich.
Miss F. Leary, Shreveport, La.
L. Lehmann, Milwaukee, Wis.
Violet C. Thorp, Houston, Texas
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Lou Gardner, Detroit, Mich.
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Bill Leake, Memphis, Tenn.
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Miss N. S. Turner, Springfield, Mass.
Mrs. D. Van Ark, Boulder, Colo.
Samuel P. Weston, La Jolla, Calif.
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Robt. S. Wilson, Richmond, Calif.
Arthur Wolff, Chicago, Ill.
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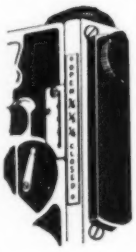

TULLIO PELLEGRINI
1545 Lombard St.
San Francisco 23, California

made available. One was the Kodak Autoradiographic Permeable Base Stripping Film in which the sensitive layer can be stripped off and applied to a radioactive specimen. The support of the stripped layer is gelatin and the image can thus be processed through the back while the emulsion surface is in contact with the specimen. The other material is Kodak Ektagraph Film which provides a hardened gelatin image which can be transferred from its support to a silk screen to give a stencil for silk screen printing. In this material, the developing agent is in the emulsion, and development is started by an "activator" instead of a conventional developer.

Among the more novel printing papers, DuPont Varigam, which gives a range of contrast control through use of filters with a single grade of paper seems to be used increasingly for special purposes.

As a result of co-operation between the Aristo Grid Lamp Company and R. S. Potter, a new printing light source has been worked out for Varigam. It consists of two interlaced cold cathode tubes, one of which fluoresces blue and the other green. The variation from blue to green required for contrast control in printing Varigam is ensured by sliding a grid which shuts out blue or green in appropriate proportions.

Each year there are new papers put out with characteristics somewhat different from the conventional, but usually revolving about a known type. One paper appeared during the year, however, which was basically new in conception. It will be known as Photostat Positive or Kodagraph Direct Positive. It is a paper developed in the Kodak Research Laboratories to give a direct positive on single development. There have been other papers which do this, such as the Kodagraph Autopositive papers, which depend on the Herschel effect, but they are very slow. This new paper, of Photostat paper speed, does not depend on the Herschel effect, but on an entirely new discovery which concerns both the emulsion and the development.

In recent years there has been an increased interest in ways of obtaining photographs quickly. Earlier work was prompted by the needs of the press photographer and the requirements of the military, and it was extended to include rapid production of motion picture films. Conventional processing was shortened by using more active compositions or by raising the temperature, and stabilization processing was devised in which the silver salts not developed were converted into a fairly stable silver compound which was left in the print, so eliminating the need for a washing. During the period in which these studies were under way, there were developed new systems which Lloyd Varden has called "diffusion-transfer reversal processes," the one best-known in this country being the Polaroid Land system.

More recently, these and other methods have been applied to the rapid copying of documents. Presently available are several variants of a process in which a paper sheet exposed to the copy by printing through or reflex is developed to a

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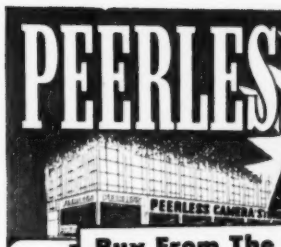

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For 2x2 and Bantam Slides
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negative and the undeveloped silver salts are transferred by contact to a paper receiving sheet in which there are "nuclei" which initiate development of the transferred material so producing a positive print. Among such single-copy processes are Agfa Copy Rapid, American Photocopy Equipment Company (Apeco) Auto-Stat, Remington Rand Transcopy, and General Photo Products Company Copi-Stat. In the Minnesota Mining and Manufacturing Company Thermofax process, a thin sheet of paper is coated on the back with a dyed wax. The material to be copied is put in contact with this and exposed to a heat lamp. The wax is melted by the re-radiation of heat from the letters on the copy and penetrates the thin paper to give an image which can be seen from the other side. The Haloid electrostatic Xerography system, which we cannot properly consider as photographic in the normal sense of the word, but which must be mentioned to complete the picture, was worked out some years ago and has now been adapted to making transfers to paper offset masters for running off large numbers of copies on office duplicating machines.

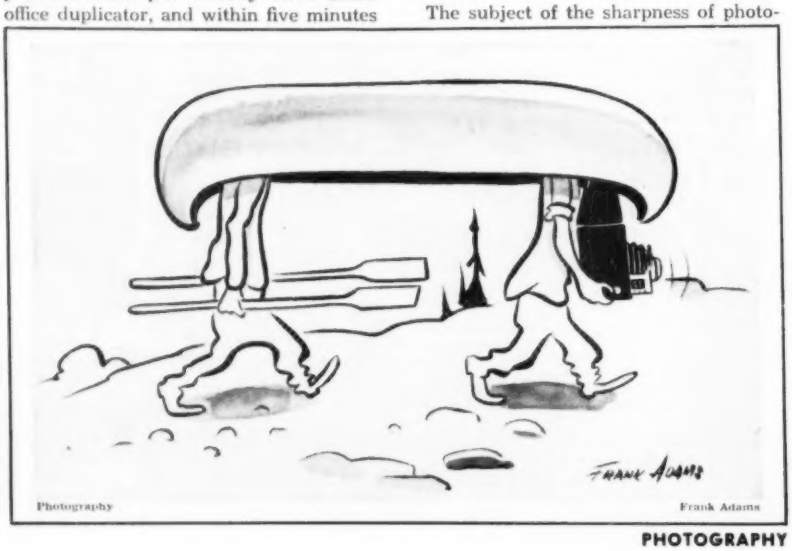
A new transfer method of document multiple-copying, known as Verifax, was announced by Kodak during the year. In it, a sheet of sensitive paper is exposed to the copy by reflex and developed in a simple solution which forms a dark dye and hardens the gelatin in the exposed areas. The sheet is then brought into contact with a plain sheet of paper, and the soft dyed gelatin image of the text matter is transferred to it. Three or four good copies can be made by successive transfers. In common with the other systems mentioned above, the whole is arranged for compactness and simplicity of operation, and it can be used in normal room light.

It might be of interest to mention a demonstration which was given to a group of newspaper editors in the Kodak Research Laboratories last year. A portrait was made, using two flashbulbs, on a special film in a camera provided with a contact halftone screen, the film was processed and put directly on a small office duplicator, and within five minutes of the time of taking the picture, lithographic prints were being produced at a rate of one hundred a minute. The product is purely experimental, but definite possibilities are indicated.

There has been renewed research on new developing agents. Henn has published results of studies in the hydroquinone and para-amino phenol series. Details have been disclosed of a new developing agent discovered some years ago by Kendall of Ilford Ltd. in England. To the chemist it is known as 1-phenyl 3-pyrazolidone, and it has been given the trade mark of "Phenidone." It is not a very good developing agent by itself, but when it is used to replace Elon in conjunction with hydroquinone in highly active developers, and in an amount which is only a fraction of the amount of Elon which would be used, very satisfactory developers result.

It has been known for seventeen years that Vitamin C (ascorbic acid) can act as a developer. Stewart, at the University of Kentucky, has recently compounded developer formulas from a related chemical compound known as reductone obtained from sugar. It gives direct production of warm tone prints. It is understood that the much-talked-of British fine-grain developer Promicrol (capable of maximum speed and forced development) is now available in this country, and that a replenisher has now been worked out. A modification of Ansco Finex developer has appeared as Finex-L. Two new developers, Kodak Ektonol and Duomat, which are modifications of Selectol and Dektomat developers, have been introduced mainly for print processing in continuous machines, the advantage being that they ensure freedom from "water-soak," which is a kind of mottle in which areas of paper take up water in such a way that they appear as if parchmentized. Rapid fixing baths using ammonium thiosulphate instead of conventional hypo are gaining in popularity, and in England and this country several proprietary formulas in liquid form have recently been made available. They permit rapid fixing and shorter washing, but overfixing must be avoided.

The subject of the sharpness of photo-



Photography — Frank Adams

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COMBINATION OFFER — 300X MICROSCOPE, 6 sample specimens and Microscope adapter set — with Kodak book on Microphotography. Ship. Cost $1. **$29.95**

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While retaining the full sharpness of your camera lens, this 5mm extension adapter is designed for moderate close-ups, at a 1:10 reduction, similar to a Plus I closeup lens, and effectively supplements your extension tube set (minimum extension 15mm). Precision-machined of chrome-plated brass.

Save Up to 50% on aluminum screw-in **LENSCAPS $1.00**

State lens you have: Tessar f:3.5; Tessar f:2.8 preset diaphragm; Biotar f:2; Biotar f:2 preset diaphragm.
Also available for rear of Kine Exakta lenses with bayonet lock. **$1.00**

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Available in Minus I, 2, 3 and 4—select any three (prices per 3): Series V $3.00, Series VI $3.75, Series VII $6.00. Shipping Cost 10c.

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80mm f:3.5, lightweight (3½ oz.) satin-finish barrel, just right for moderate telephoto and portrait work. **$19.95**
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135mm f:3.8, the favorite telephoto lens of many Kine Exakta owners; preferred by many users to any other 135mm lens, regardless of cost. **$49.95**
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Makes Praktica into rapid-shooting camera, also a great help in macro and micro photography. Ingenious roofprism principle shows unreversed, right-side up image.
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UNIVERSAL ZOOM FINDER ..... $29.95 Ppd.

For Leica, Contax, other 35mm cameras
Without any attachments, this newly designed finder shows the exact field of view of any lens from 28mm to 135mm in focus length — not just by 'masking', but by truly magnifying and reducing image the same way the camera lens does. Clickstops for all eight important focus lengths. Ingenious parallax correction with settings to 3 feet. Fits finder shoe. Comp. with luxuriously lined leather case.

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There is no substitute for the use of a wideangle lens. A negative or transparency cannot possibly be made to show 'more' than the original lens recorded—yet, so often does space limit the camera position to a point, where inclusion of every important part of the subject with the normal lens is simply impossible—this happens as often outdoors as it does indoors.

A Wideangle lens is the most indispensable camera accessory you will ever own.

Spiratone is proud to bring you a large selection of wideangle lenses at down-to-earth prices for virtually all camera types. Some of these lenses are our own make, or made for us, others bear the names of well-known German or Japanese manufacturers. All lenses are subject to our usual guarantee, are coated, color-corrected and anastigmatic.

For 8mm

Your choice of two six-element lenses, both with these extra features: Clickstops, chrome-finish, built-in filterholder.
6mm f:1.9, an extreme wideangle lens at the unheard-of-low price of **$29.95**
7mm f:2.5, a slightly slower lens, covering four times the area of the normal 8mm lens, everyone can afford it! **$19.95**
These lenses fit all 8mm Revere, DeJur, Keystone, B&H and Kodak Reliant cameras — state make, model you have. *Leather Case 75c*

For the LEICA, CANON
This lens was made to fill a gap in the wideangle field—for the first time, you can now obtain a brand-new first class wideangle lens for the Leica at a reasonable price. 35mm f:3.5, rangefinder-coupled, clickstops, light-weight, satin mount—definition compares with well-known German wideangle lenses. You did right in waiting for this buy at..... **$75.95**
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For the 35mm- ARGUS, BOLSEY

SIGNET, KODAK 35, MERCURY, CONTESSA 35 and most other 35MM CAMERAS. The Spiratone aux. wideangle lens fits right over the normal camera lens, like a filterholder, requires no installation. Each lens comes with a filterholder, leather case, simple instructions—many lenses can be used, by means of extra adapters, on several different cameras. No change in exposure necessary. **$16.95**

For the EXA, KINE EXAKTA
Already high-ranking in popularity is the 40mm f:3.5 Japanese-made wideangle lens, one of the sharpest on the market. Chrome mount, depth of field scale, priced at only **$39.95**
Deluxe Leather Case $3.95

For 2¼x3¼
A new 65mm f:6.8 lens in the famous Prontor S shutter. Covers about 65 degrees, is ideal for 2¼ x 3¼ Busch, Graphic, similar cameras. Shutter is synchronized, has speeds from 1/250th to 1 second T., B. and delayed action. **$29.95**

For 4x5

Commercial photographers and advanced amateurs alike have waited for just such a buy! Made by Leitmeyr, an old-time German optical manufacturer, the 105mm f:6.8 coated wideangle anastigmat is for the 4x5 press camera owner just "what the doctor ordered". It covers approximately 85 degrees, and one half of the lens can be removed, converting it into a telephoto double the original focus length. The popular shutter has eight speeds and B; delayed action and built-in flash. Shipping Cost 35c..... **$19.95**

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graphs is one with which a photographer is much concerned, unless, of course, he deliberately wants to introduce unsharpness by diffusing devices. A lot has been learned about sharpness lately, and many assumptions have been disturbed, particularly by Jones and Higgins in the Kodak Research Laboratories. Foremost is the discovery that resolving power as usually measured cannot be used to predict with certainty the ability of a lens or film to produce sharp pictures. A print was actually made with a material having a resolving power of 130 lines per millimeter which was markedly sharper than one made on a material capable of resolving 230 lines per millimeter. The physical equivalent of sharpness is now known as "acutance," which can be measured by the variation of density across the edge of the dense area which is obtained when a film is exposed while partly shielded by a knife-edge in contact with the emulsion. There is not an abrupt transition from dark to light, but the change is gradual at the edge and the way it changes is used to define acutance. It is hoped that measurements of this kind may eventually lead to films giving sharper pictures.

One of the most spectacular and technically difficult photographs ever published must certainly be that of Joseph Costa, Chief Photographer of the *New York Sunday Mirror Magazine*, depicting the opening night at the Metropolitan Opera House towards the end of 1951. The entire house, packed with a living audience, was photographed on Ektachrome using batches of strategically-placed Sylvania flashbulbs. The two weeks of preliminary negotiations and the days of preparation involved would have discouraged people not possessing the heart of Mr. Costa.

A high percentage of television is now done from motion-picture films instead of from live subjects, and there seems to be evidence that this percentage will increase, especially when so-called "flying-spot" scanning is used. Color television has scarcely yet made its debut but it is clearly well on the way, and it should not be long before the heavy demand for films for television includes also color prints. Presumably the release by the F.C.C. permitting large numbers of television stations to be erected in the future will create a need for photographers who can provide local commercial and news material.

In the interest of brevity, this review cannot include more than a few of the new developments during the year, and we have made very little mention of the progress in the fundamental investigations in photographic theory. We have indicated briefly at the outset that there have been some basically new discoveries made during the year, and where they will lead we cannot tell. More money is being spent and more scientific minds are being applied to research in all aspects of photography than ever before. Even though part of it may be concerned with military problems and with special applications of narrow interest, experience gained will be applied to progress in photography in all its aspects.—

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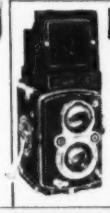

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stereo today

by Robert L. McIntyre

Have you ever wondered, after seeing the list of judges in a photographic exhibit catalog, how their own pictures would have made out in the competition? I had a chance to find out while slides were being selected for this year's Lighthouse stereo show. Of course the judges aren't eligible to enter and it's all very unofficial, but here's how it happened.

I've been especially interested in the Lighthouse exhibit ever since it started as the first international competition for modern color stereo. For the past two years I had been one of the judges, meanwhile wondering how my own slides would have been rated. This year I wasn't on the panel, so I carefully selected four slides and got them in early.

A few days before it was scheduled I got a call from George W. Blaha, APSA. One of the judges had been called out of town, and would I take his place?

I'd be glad to, of course, but would he do me a favor? Would he leave my slides in for the judging, then pull them out before the award-winners were selected—if, by chance, the rest of the jury hadn't seen to that already? That way nobody could be hurt, and my curiosity would be satisfied. He agreed, I suspect with a little curiosity himself.

Came the day of judging, and the five of us settled down to pick a 300-slide show out of some 1,600 slides from 410 entrants. Regular members of the panel were Robert V. Brost of Three Dimension Company and Sawyer's, Inc.; Frank E. Fenner, FPSA, of Field Enterprises, former editor of PHOTOGRAPHY; Earl E. Krause, FSG, founder of Jackson Park Camera Club's stereo section; and Dr. Frank E. Rice, APSA, chairman of the Photographic Society of America's stereo division.

Voting was with green and red lights simply signifying "in" or "out." I had decided to vote green on all my own—that way nobody could question the result when I eliminated my own vote to get the score by the rest of the panel. At first I began to look for familiar slides. Then I became absorbed in the competition.

It wasn't until after the first brief rest period that one popped up. It caught me by surprise. I pushed the green button hard, and kept my mouth shut only with great effort as five green lights flashed on the scoring machine. This was fun! I gave the next couple of slides green lights out of sheer good spirits.

The rest of the judges were kind without knowing it. They let me down easy. My next two got four "ins" with the help of my green light. The last slide would be my best, I thought, but was I wrong! It squeezed out three greens. Only two other judges liked it, and for all I know they may have been only luke-warm. That's one fallacy of the "in-and-out" system—five half-hearted "ins" score just as high as five enthusiastic ones.

What did the experiment prove? It all depends on how you want to juggle the figures. With the aid of my own little green light I scored 5-4-4-3. The five and two fours would have made the exhibit and three would have been out, but it's obviously unfair to go by that vote. No other judge could have been as consistently sold on my pictures. With my own votes all red instead of green, only one slide would have rated acceptance.

One thing it does prove is that the competitions aren't easy marks. Even as a judge, giving my own slides a perfect score, I couldn't have gotten them all into the show. Another thing it brings home is that competitions are fun. It's a thrill to get a high score on a slide, to see how your own work compares with that of hundreds of hobbyists. There is just enough luck involved so you need never feel too good about winning or too bad about losing. The individual preference of all the judges are bound to influence their decisions, and so are the accidental factors like the quality of their slides that happen to be shown just before yours.

I'm already thinking about slides for next year, when my entry can be official. Why don't you plan on trying, too?

• •

The Lighthouse exhibition was harder on its judges than any previous show. Two things made it tough. In the first place, there were 1,600 entries. That made it the biggest stereo show thus far. By the time awards had been made and honorable mentions selected, slides had appeared on the screen 2,000 times. That wouldn't be so bad in itself; regular slide shows often run larger. What really hurt was the wide variation, from slide to slide, in mounting. The accompanying self-portrait shows how I feel about the present status of stereo mounting for projection—maybe better than words can tell. Any one of the systems now in use would be preferable to the present chaos. The trouble is, we have too many different systems and they are incompatible. The separation of transparencies with Holson mounts is 2.330 inches. With Permamounts it's 2.450 inches. You can't project these two intermixed, for example, without making gross projector adjustments. Watching the screen during the adjustment gives you a feeling that your eyes are being twisted in their sockets. Any photographer can present a smooth showing of his own slides by projection if they are all well mounted by the same system. The trouble starts when you want to make up a program of slides from different sources. Club activities and exhibitions will be hampered until projection standards are established, but once the standards are tentatively set the clubs and exhibits can speed their general acceptance by requiring that participants comply with them. The stereo committee is working on an ASA standard now. It's up to them.—

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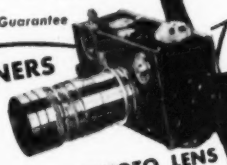

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Simple Meter For Electronic Flash

(Continued from page 72)

a properly synchonized electronic flash unit emits all of its light "instantaneously" immediately after the shutter is fully opened, the shutter speed can be disregarded in calculating the correct exposure.

The six numerals in the scale of the Leudi #3 meter represent steps two full lens openings apart. Twelve steps would be much more accurate, especially for color, but this would involve the preparation and substitution in the meter of a special step-wedge. A practical alternative is to judge the lowest visible number as either "clear" or "dim" (just faintly visible). A few test flashes will give you enough experience to judge the difference between clear and dim readings very readily. Now, in using the computer scale, follow this procedure:

Two columns are printed on the movable plastic sleeve on the outside of the meter—a series of increasing *f*/numbers, and opposite them the six numerals are seen in the meter's viewing window. Thus:

f:	*Numeral*
1	6
1.4	
2	5
2.8	
3.5	4
4.5	
6.3	3
8	
11	2
16	
22	1
32	

Since the spaces in-between numerals are aligned opposite *f*/-numbers the calculator scale is expanded by assigning the "dim" reading to each of the printed numbers on the sleeve and assigning the "clear" reading to the intermediate, formerly unassigned *f*/-numbers:

f:	*Numeral*
1	6 dim
1.4	6
2	5 dim
2.8	5
3.5	4 dim
4.5	4
	etc.

Since the printed columns on the meter sleeve may not be correctly positioned for the speed of the film you are using, the two columns may have to be shifted in relation to each other on the basis of a practical exposure test. After making a correctly exposed shot, write the correct *f*/-number opposite the lowest visible number in the meter window. Let's say the "correct" lens opening is *f*/8 and the numeral is 4 "clear." Now write down this combination and fill in the two columns above and below the respective figures, which gives you the table that can regularly be used with the same film speed in the future:

f:	*Numeral*
1.4	
2	6 dim
2.8	6
3.5	5 dim
4.5	5
6.3	4 dim
**8	**4
11	3 dim
16	3
22	2 dim
32	2
	1 dim
	1

When the entire scale is illuminated and the numeral "1" is clearly visible, it is obvious that the scale is no longer accurate. This situation can be corrected by placing a single thickness of blue du Pont Cellophane (the type packaged by Dennison) over the back of the meter window which will reduce the amount of light entering it by exactly two full stops. Then recalibrate your meter scale accordingly. It is rarely necessary to use two thicknesses of Cellophane.

For judging the exposure of ordinary scenes, the meter should be directed at the medium tones, not at the extremely bright or dark areas. The extinction-type meter is much more selective and takes in a narrower angle of view than photoelectric types. If it is difficult to select a typical medium-tone area, it is easy to substitute a target of average reflectance in the subject position and read its reflectance. An Eastman gray card having an 18 per cent reflectance is ideal. When medium-tones give too low a reading, substitute a clean white target in the scene and increase the indicated exposure by 3 full stops.

As for color, the safest method is to peg the exposure either to the 18 per cent gray card or to the most important flesh tone in the scene after confirming results with trial readings and exposures that have been carefully compared.

A Leudi meter was chosen for this adaptation because of its compactness and because the numbers are in a straight line and allow the eyes to perceive the reading in the instant following the brief test-flash. Doubtless other makes of extinction meter could be used, possibly with even more effectiveness than this one. The light shield or baffle may be of any light-weight opaque material, such as corrugated or ordinary cardboard. A board of 8x10-inches was found to be the smallest size practical. Although light-colored cardboard is shown in the accompanying illustrations for the sake of photographic clarity, it should actually be painted black or covered with black paper for maximum effectiveness as a shield.

There are two major advantages of this system over the "guide-number" method of calculating electronic flash exposure: (1) This measurement system takes into account the amount of light reflected by the surrounding walls, ceilings and other reflecting surfaces which has to be estimated and accounted for when you use guide numbers and (2) guide numbers at very best are a "guide" to the exact exposure whereas the system described above is objective and reproducible.—

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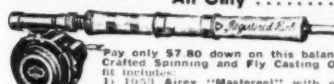

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4) **Heddon** "Spin Pal." Specify 100 or 200 yard capacity Spool, available for right or left handed persons, specify. Reg. $23.00 ..... **$22.50**
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February 1-15

CALIFORNIA, Los Angeles—(Fred Archer School of Photography); Fourth Salon.
FLORIDA, Jacksonville—(Jacksonville Camera Club); Fourth Salon.
ILLINOIS, Chicago—(De La Salle High School); Second Salon.
ILLINOIS, Chicago—(Armour Research Foundation Camera Club); Seventh Salon.
KENTUCKY, Louisville—(Louisville Free Public Library); Seventh Salon.
MARYLAND, Perry Point—(Veterans Administration Hospital); Seventh Salon.
MICHIGAN, Jackson—(Jackson Camera Club); Second Salon.
MICHIGAN, Midland—(Midland Camera Club); Sixth Salon.
NEW JERSEY, Dover—(West Morris Camera Club); Fourth Salon.
NEW JERSEY, Englewood—(Englewood Camera Club); Fifth Salon.
NEW YORK, New York—(Foremost Camera Stores); Eighth Salon.
NEW YORK, Schenectady—(Schenectady Photographic Society); Fifth Salon.
OHIO, Akron—(Akron Camera Club); Third Salon.
OHIO, Dayton—(YMCA Photo Arts Club); Seventh Salon.
OHIO, Dover—("Y" Camera Club); Sixth Salon.
TEXAS, Port Arthur—(Port Arthur Camera Club); Sixth Salon.
WASHINGTON, Seattle—(West Seattle High School); Fifth Salon.

February 1-28

PENNSYLVANIA, Pittsburgh—(Buhl Planetarium and Institute of Popular Science); Eighth Salon.

February 23-March 28

MASSACHUSETTS, Attleboro—(Attleboro Museum); Seventh Salon.

March 1-15

ALABAMA, Northport—(Tuscaloosa County High School); Seventh Salon.
CALIFORNIA, Burlingame—(Camera Craft); Fifth Salon.
CALIFORNIA, San Bernardino—(The Harris Company); Fourth Salon.
ILLINOIS, Alamont—(Alamont Lions Club); Sixth Salon.
ILLINOIS, Centralia—(Egyptian Camera Club); Second Salon.
ILLINOIS, Savanna—(Savanna Camera Club); Seventh Salon.
IOWA, Fort Dodge—(Fort Dodge Camera Club); Seventh Salon.
MICHIGAN, Grand Rapids—(Fuson's Camera Shop); Second Salon.
NEW YORK, Rome—(Rome Camera Club, at Jervis Public Library); Fifth Salon.
OHIO, Cincinnati—(Public Library of Cincinnati & Hamilton County); Sixth Salon.
RHODE ISLAND, Pawtucket—(Blackstone Valley Camera Club); Eighth Salon.
RHODE ISLAND, Providence—(Providence Public Library); Fifth Salon.
TEXAS, Beaumont—(Magnolia Camera Club); Sixth Salon.
UTAH, Salt Lake City—(ZCMI); Eighth Salon.
WEST VIRGINIA, Charleston—(Mountaineer Camera Club); Third Salon.

March 2-16

ALABAMA, Montgomery—(Montgomery Public Library); Fourth Salon.
ALABAMA, Tuscaloosa—(Veterans Hospital); Seventh Salon.
COLORADO, Colorado Springs—(The Focus Club); Sixth Salon.
PENNSYLVANIA, Yardley—(Pennsbury High School); Fourth Salon.
VIRGINIA, Williamsburg—(College of William and Mary); Sixth Salon.

March 13

NEW YORK, New York—("Tops in Photography" Show by Metropolitan Camera Club Council); Eighth Salon.

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	2.25
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PANCHROMATIC 50W—FINE GRAIN
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photo tips

An Efficient Lint Remover

If a bit of lint or fuzz should fall on a negative while it's drying, care is needed to remove the foreign particles from the dry negative, as rubbing or scraping leave scratches. Try placing a piece of transparent adhesive tape carefully over the spot; don't press down firmly, just apply as shown in the accompanying illustration. Then peel tape off gently; it will carry the foreign particles with it, and will leave no mark on the negative.—*Ken Murray, Colon, Mich.*

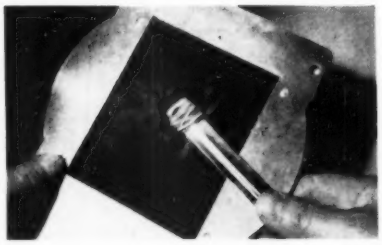
Keeping Scales Well Lubricated

After long use, darkroom scales sometimes develop a tendency to stick. Oil used as a remedy may thicken and gum, thereby adding to the difficulty. A dry graphite lubricator, intended expressly for the purpose of lubricating locks and similar mechanisms, has given excellent results. It's supplied in plastic tubes, providing even, accurate distribution of the graphite. Only a small quantity is required for each long-lasting application.—*George S. Greene, Detroit, Mich.*

Time Saver in Handling Paper

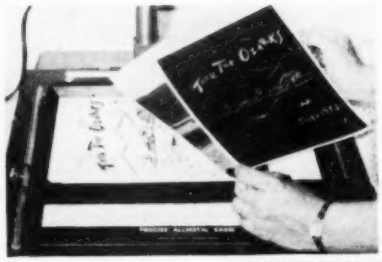
The following device will save time and work when using contact paper from a 100-sheet or 500-sheet box: Tape an empty photographic paper envelope to the lid of the contact paper box, as shown. Remove as many sheets as desired from the box and put them in the envelope, where they are readily available and can be removed quickly for use. This eliminates the necessity for frequent unwrapping and rewrapping of the paper in the box.—*John J. Rea, Urbana, Ill.*

Avoid Fingerprints on Negatives



Even with great care in adjusting negatives in glassless holders, fingerprints will sometimes appear on the negatives, particularly if hands are damp. To guard against these unwelcome marks, use print tongs with rubber bands twisted around the end of each "leg." Drop the negative into place, by its edges, in the holder, then adjust with the tongs. The rubber-covered ends will grip firmly, permitting adjustment to exact position, leaving no marks.—*Kay Bronaldo, Sturgis, Mich.*

Transparent Medium for Printing Effects



A piece of clear plastic or glass, plus a china-marking pencil, provides a quick, easy method of printing titles, captions, etc. For a title page, letter and sketch the design on the clear medium, place it in contact with printing paper in the easel, expose by enlarger light, and develop. Used in combination with negatives, many effects are possible by means of the glass or plastic, from which the pencil design is easily removed with a soft cloth.—*G. C. Graham, Pine Bluffs, Ark.*

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- Body Release with Double Exposure Prevention
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- Depth-of-field Scale
- Self-erecting Focusing Hood
- Wide Field Focusing Hood
- Wide Field Focusing Magnifier
- Open Frame Sport Finder
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90mm Elmar f4	$ 77.50
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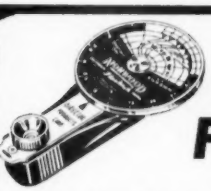

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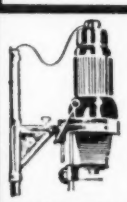

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Counterbalance for 2¼ x 3¼ Models	$3.99

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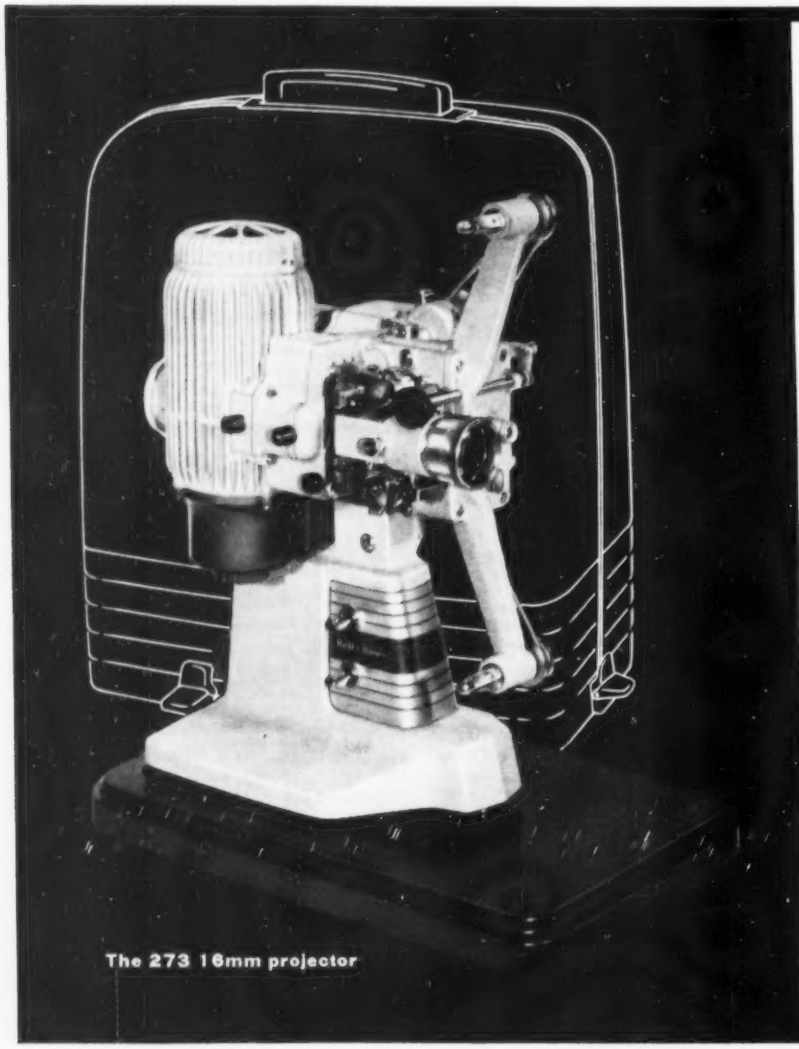

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makes it fun to make (and show) movies!

BE PROUD OF

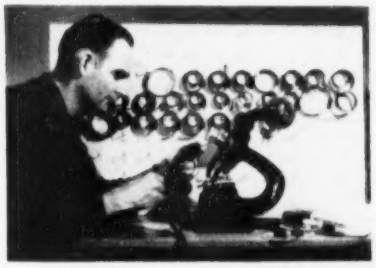
WELL-EDITED FILMS

By LOUIS ELL

J. C. Gonzalez

Much satisfaction comes from being able to project smooth-flowing, well-edited films. Don't be satisfied with unrelated shots—make your movies tell a story.

A GOOD home movie always starts with an idea—naturally. Next, you must have enough drive to actually get the camera out and shoot the scenes. But you still have a mighty important bit of pleasurable work to do when your reels come back from the processor—*editing*. After one or two familiarizing projections, clip out any light-struck areas, badly exposed bits, regroup scenes for most effective presentation, and splice them together (on large reels to obviate the necessity of changing short ones often). Shots that do not fit your current theme can be saved—to use as "stock shots" later. Then with film in good order, all this production care begins to become apparent on the screen, and you have a film you can show with pride.—



Careful worker doesn't show reels just as they come from the processor (above). He edits them—discards bad footage, cuts out scenes, arranges them (see numbered clip board, above, right), and regroups them for continuity. Good shots that don't fit can be filed (right) for future use.

WHAT'S WRONG WITH

EVERYTHING

says JOSEPH V. MASCELLI

Many amateur movie shots, like this, could be made as well with a still camera, says author Mascelli. "Firing a movie camera at a static subject can't create motion," he claims.

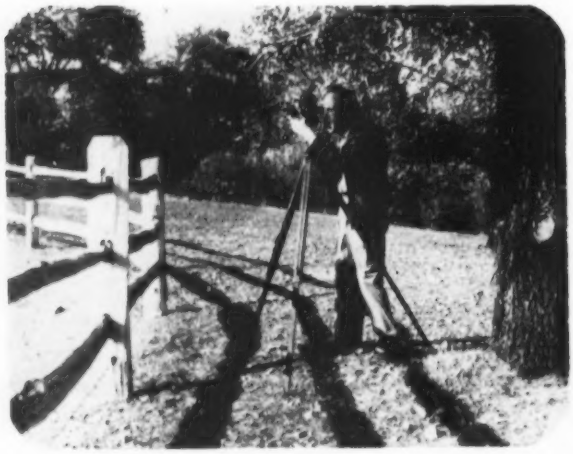
TODAY'S amateur movie makers—employing equipment that would have been the envy of old-time professionals—grind out pictures that appear as if they were shot by a congenital imbecile during a nightmare. Actually, there is nothing wrong with amateur movies—it is the unimaginative way amateur cameramen employ the really fine cameras and accessory equipment at their disposal, that accounts for the meaningless miles of insipid home movies that are foisted on poor defenseless friends and hapless neighbors.

The potential power of the motion picture for influencing commerce and education, or for simply telling an interesting story, are so great as to stagger the imagination. The many advances, both technical and esthetic, during the more than half-century since the movies' inception, has resulted in the motion picture's acceptance as a modern art form and entertainment medium unequaled by other mass media.

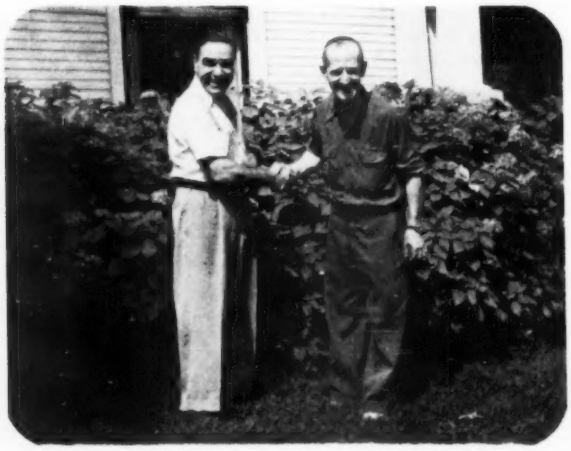
The movies' story-telling power is not the sole possession of Hollywood producers. They may appear to monopolize the story film, but the imaginative amateur filmer may utilize the same methods to tell a story with his movies. Yet, how many movie makers do? There are more than 900,000 amateur cine cameras in the United States—but only a mere handful of movie makers even approach the opportunities allowed them to use their motion picture camera as a narrative instrument. A recent survey by the Eastman Kodak Company reveals that the average amateur filmer uses only *four rolls* of movie film a year. Even *that* he shoots badly.

Most amateurs admittedly purchase a movie camera for record purposes only—to film their vacation trips and their growing children. But, that is no excuse for the enormous volume of badly filmed footage, which for the most part amounts to little more than animated snapshots.

The majority of amateur (*Continued on page* 98)



"Rock-steady screen images mark the professional; a tripod is the most useful item a movie maker can employ—yet how few amateurs use them," Mascelli challenges.



Dramatic advantage of little movie stories seldom is taken by amateurs, says Mascelli. "They are content to shoot people shaking hands while grinning sheepishly lens-ward."

AMATEUR MOVIES?

NOTHING

says VINCENT MARTIN

IT IS UNFAIR to judge amateur movies by professional standards. To the pro, movie making is a vocation—to the amateur, an avocation. Therein lies the difference in their thinking, their approach to movie making and their resulting films. A professional motion picture must, of necessity, be a smooth, slick, technically perfect product in order to meet competition and to have hopes of being financially successful.

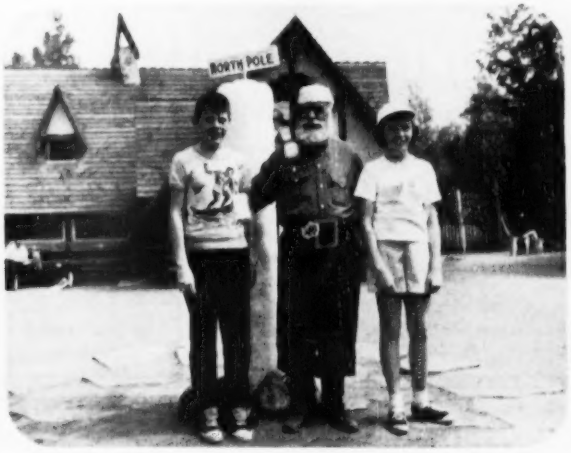
The average movie-maker, like myself, uses his movie camera to preserve a record of his growing children, capture memories of places visited and record family happenings of lasting interest. We are content to film these things as they occur, in all their spontaneity, without frills or professional camera treatment. We are *not* shooting a movie for the neighborhood theater—but, instead, one for our personal family living room. If the pictures are sharp, reasonably well exposed and do no more than bring back memories of happy times in the halcyon past—what more can we ask?

We must remind ourselves that amateurs embrace a hobby for fun—for the relaxation they receive and the pleasure it gives them to creatively express themselves. If they must follow a strict pattern, imitate the professional and try to perfect their technique to a point where their hobby becomes a deadly chore—it's time to quit and find something less nerve-wracking. It is true that amateur movies sometimes are boring, often deadly dull, and at times without story-telling qualities. But remember they were made for a select group of family and friends—not for a theater audience. That group always will enjoy seeing movies of themselves and people they know, regardless of the lack of continuity, trick camera angles, expert editing, on-the-button exposure, and brisk lighting.

What's wrong with the desire to bring back a movie memento of a vacation, a hunting or fishing trip or a South American cruise? What's the (*Continued on page* 102)

Amateurs are sentimental; many simply want to preserve a record of family and good times for later review—what if such films are less than perfect, retorts Vincent Martin.

Vacation trips and historical sites often must be filmed "on the run"—without benefit of tripod. Must such movies be given up because they lack professional perfection?



Scenes of growing children and places visited allow such experiences to be re-lived at will. Technical excellence is secondary, and isn't that as it should be, queries Martin.

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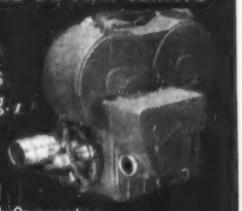

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Photographs By CHARLES TERNES

Photographer, *Niles (Mich.) Daily Star*

AN ARTICLE in PHOTOGRAPHY (*Candid Photography with a Twin-Lens Reflex* by Bob Schwalberg, April, 1952) inspired Charles Ternes, an alert photographer for the *Niles* (Mich.) *Daily Star* to use candid, existing light techniques when covering local news stories. Some of his excellent results are shown here. Ternes writes, "of particular interest in the article was the suggestion for processing film in Dektol to boost ASA rating. I began to experiment with Dektol—with surprisingly good results." These shots were made on Super-XX, exposed for 1/60 second at *f*/2.8, and developed in 1-to-1 Dektol. Ternes now carries his Tower 35 on many assignments. He concludes, "To date we have published several picture stories I have taken candidly in poor light conditions. They have helped us do a better job."

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What's Wrong with Amateur Movies?
EVERYTHING

(*Continued from page* 94)

cameramen rise up from the ranks of still photography — proving that they wish their photographs to accomplish more than merely *suggest* action. They are desirous of portraying their picture stories in motion. Yet they refuse to *think* in motion! This can be explained partially by their choice of subject matter—material which better lends itself to still photographs and color slides, rather than movies. The average amateur movie maker believes that merely firing a movie camera automatically creates motion in a static subject. A picture of a building, a person, an automobile, or the like, is meaningless unless included in a movie for a definite reason. This does not imply, however, that quiet scenes or those having little or no motion should never be filmed. They may be utilized to establish a quiet mood or atmosphere, or, through contrast, increase the violence of action scenes that follow. On the whole, however, the greatest part of the amateur's chosen material could be better covered with snapshots.

A great deal of amateur footage is filmed on impulse, rather than planned. Something pops into view that looks good and the movie maker swings his camera to eye-level and fires away. While movies need not be shot from a shooting script, even the simplest film deserves a little plan.

Many amateurs lose interest in movie making once the novelty of seeing themselves, their family and their friends in action, wears off. Few make a serious effort to analyze their material, plan a little story with some semblance of continuity, or break down their movie into sequences. They are willing to quickly appraise a scene—make one lousy shot and move on! This is definitely *not* the way to make movies. The cine cameraman must think in sequences. He must plan his action so that it is established in the opening long shot, developed in the medium shots and enhanced through abundant use of cut-in and cutaway close-ups and reaction shots. Amateurs *never* film enough close-ups! They seem afraid to approach their subjects and fill the screen with their features. Yet, close-ups are easy to shoot, inject an intimate dramatic quality and get a greater audience response than any other type of shot.

Amateur movies also are guilty of too much camera movement. A smoothly executed pan shot can be a beautiful thing—but in the fumbling hands of an inexperienced amateur cameraman it becomes an unleashed monster. Amateurs could improve their movies immensely by employing a sturdy tripod—*minus* a pan head! But, there's the rub—how many amateur filmers make use of a tripod at all? This single item—the most useful accessory available—should be number one on the amateur movie maker's list. The key to professional appearing movies is rock

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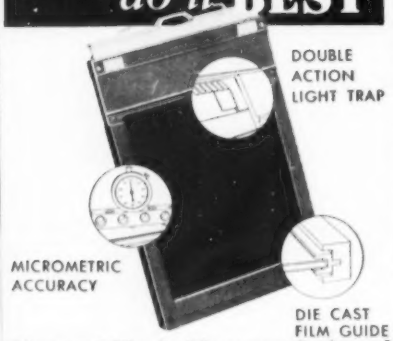

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steadiness—it is impossible to achieve this without a tripod.

Home movie cameramen will not purchase an inexpensive tripod but they *will* buy the longest telephoto lens they can find—and then use it once a year. Or, they will purchase an ultra-fast objective which they rarely have the opportunity to employ wide-open. Or, they will buy other needless accessories which proves that they are merely collectors of fancy equipment, which they take pride in possessing or showing off to their friends.

While it is elementary that movies must move—it is the subject that should provide the motion—not the camera. Let movement *within* the scene tell the story—not camera movement. Use motion to advance your story—not detract from it. Overlap movement between shots so that you may "cut on action" later. There is no earthly reason why action should start and stop everytime the camera does! Your subject should enter, move about, and leave the frame—do not pan to keep it constantly centered. Few amateurs use a statically fixed camera imaginatively for dramatic portrayal of subject movement within a rigidly set composition. It takes an experienced professional to move a camera about in such a subtle way that it does not draw attention to itself. Only an advanced amateur movie maker can have the proper respect for panning and moving shots and know how to use them sparingly and effectively.

Amateurs do not take dramatic advantage of little movie stories existing all around them. They are content to make shots of their friends and relatives shaking hands with each other while grinning shsepishly into the lens. The many possibilities for producing fine films right around home or town are completely ignored. The mere caressing of a movie camera brings enchanted visions of faraway romantic places into their cine minds. They must get away from it all: "Ah, if I could only go to Tahiti—whata film I'd make. I'd show those guys at the camera club a real movie!" Yet, right under their very noses is more movie material than they could exhaust in a month of Sundays.

But, when they do take a trip—what do they shoot? Mom films Dad leaning against the new car, on the rim of the Grand Canyon—with the sky as a background. Drive two thousand miles to make movies they could have filmed in their own backyard.

What can you expect from amateur cameramen who refuse to improve their movies by reading a good cine text book or other movie literature. Many amateurs do not even bother to read the instruction booklet that is supplied with their camera! (Incidently, when was the last time you read a book on movie making?) Do you expect good movie technique to come to you in a dream? Do you believe that mere possession of an expensive motion picture camera automatically makes you an expert? It would appear that the less an amateur knows about photography, the more elaborate his camera equipment. The average amateur filmer would do well to settle for a simpler camera and spend the difference on a few excel-

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lent photographic volumes and a few rolls of black-and-white film to perfect his cine technique.

Yet, how few of the fortunate amateurs possessing super-cine cameras take full advantage of the many wonderful built-in features. Take the various film speeds available on most models: other than an occasional high-speed shot it is rare that camera speeds other than normal are employed. Movie cameras equipped with wind-back mechanisms, variable shutters and single-frame exposure levers are rarely, if ever, utilized to their fullest extent.

How many amateur cine cameramen edit and title their films? The picture they shoot is the picture they project. Little do they realize how much they can improve their movies by trimming poor footage, tightening their picture and inserting a few explanatory titles. Often the simple insertion of a close-up or two, the filming of a reaction shot, or the addition of a few scenes necessary to "tie" the movie together—are all that are needed to turn a poor picture into a better than average film.

Amateur filmers are not interested enough to sit down and analyze exactly what is wrong with their mediocre movies—they continue to make the same mistakes over and over again. They shoot the same, dull, lifeless pictures of their children and their vacation trips and then wonder why their neighbors rather play bridge than look at home movies!

Vast sums need not be spent to produce good pictures. All it takes is a vivid imagination, combined with boundless ambition and sprinkled liberally with passionate enthusiasm, to pep up poor pictures and save helpless ones. For good movies are first visualized in the mind's cine eye—and then filmed with the movie camera. The movie maker who simply refuses to take the trouble to make movies properly—will never produce a picture worth viewing. The still photographer may shoot an occasional "lucky shot" but a good movie requires proper planning, careful treatment and good technique—it is not produced by luck!

The amateur with the proper approach, the will to make the most of his cine equipment and the sincere desire to shoot good movies—even if they are only record films—will amaze himself and his friends with the professional-like results possible with amateur equipment. The many opportunities to study theater movies, the vast amount of excellent technical literature in print and the myriad possibilities for extensive experimentation—all add up to numerous methods for improving the quality of *your* home movies. Why not take stock of your past movie accomplishments and make up your mind right here and now to improve your future filming?

What's Wrong with Amateur Movies? NOTHING

(*Continued from page* 95)

difference if the resulting films possess little or no continuity, are not perfectly exposed, and the composition is a bit off at times? An amateur sees more than the image on the screen—he re-lives that trip every time he projects the film. He and his family are pleasantly reminded of the fun they had, the pretty places visited and the wonderful people they met. Most amateur photographers are sentimentalists—they wish to preserve a record of their family and good times for nostalgic review in later years. Must all this be given up because the results are not professional—because the finished picture doesn't have the appearance of a FitzPatrick travelogue?

Baby taking his first faltering steps, Junior's college graduation, Sis's June wedding—even if they aren't faultlessly filmed—are worth all the feature films Hollywood turns out in a good year. Why condemn the amateur movie-maker for lacking the technical ability he is not desirous of possessing? If all he wishes is to record a personal family newsreel and bring back moving colorful souvenirs of his pleasant travels—for happy viewing when he returns to his humdrum workaday existence—why criticize his honest endeavors? Amateur movies should be filmed with the heart—not the brain. They should express the emotions of the movie-maker and imbue his audience with the wonderful time he had or express the way he felt when the film was exposed. The movie maker's family and his friends should understand this, overlook the technical shortcomings and see the picture in this light—they should not view it by the standards they employ to judge a professional movie.

As for shooting sequences: many amateurs can't afford to waste costly color film on a complete movie sequence whenever they wish to record an event or a bit of scenery. If all they can allow is just one shot—what's wrong with that? They can't grind film "ten to one" like the pros, and throw away ninety per cent of their footage, just to preserve continuity and make certain the picture will cut. Even if the amateur has unlimited film to shoot, he rarely possesses the time. A vacation trip usually is taken for other than photographic reasons and no pest is worse than the amateur movie fanatic who is constantly posing everyone or stopping a guided tour so that he can make movies of the proceedings. Of necessity, then, most amateur movies are made up of grab shots, not always expertly exposed under the best of conditions.

Amateurs are criticized constantly for refusing to use tripods and accused of being gadget collectors. On a trip, considering both the baggage problem and the time element, it usually is impossible to take along a tripod or find the time to set it up. Movie making on the run is not accomplished easily with a tripod. The best the amateur can do is use a tripod around home and teach himself to hand-hold his cine camera as steady as possible when filming "on the fly."

A home workshop hobbyist may purchase every machine under the sun and no one blames him, but let an amateur cameraman buy a fancy chromium-plated accessory and he is accused of grand larceny. An amateur photographer takes

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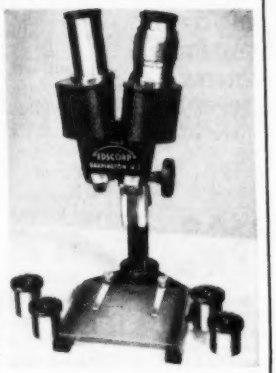

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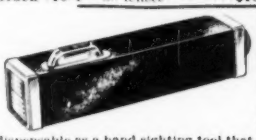

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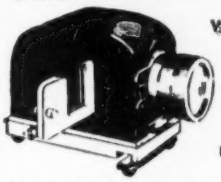

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As an avowed movie-maker I protest the continuous lambasting given us by both pros and semi-pros, who take great delight in pointing out the shortcomings in our films. I honestly believe that home movies are a personal matter and that every amateur movie-maker has the right to use his camera as he sees fit. He should not be tied down by rigid rules created by a small group of pseudo-intellectual cine technicians who feel it their God-given duty to straighten out their less experienced fellow cameramen. I, like a lot of other amateur filmers, honestly try to make good movies but I'm not going to lose any sleep over a sequence that doesn't cut or worry about such subtle refinements as screen direction, when all I desire is to capture a few fleeting glimpses of my kids romping around the yard, or preserve a few interesting sights seen on a vacation trip.

I do not mean to belittle the serious amateur cinematographers, filming story pictures, who are trying their best to imitate professional technique and inject production quality in their movies. But, they, on the other hand, should not sneer, and look down their noses, at the rest of us movie-makers who ask nothing more than to be left to our own devices, to enjoy our chosen hobby in our own way. When George Eastman introduced 16-mm reversal motion pictures, and the first hand-cranked Model A Cine Kodak in 1923, he said, "Now movie-making is for the millions." Let's keep it that way, let's keep amateur movies a popular form of photography to be enjoyed by all regardless of their motives, their technical knowledge, or their disregard for professional standards.—

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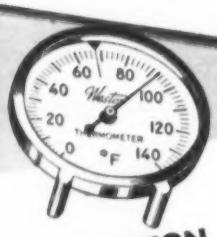

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camera clubs

by Whit Hillyer

You've a Job to Do—NOW!

Remember way back in World War II, when camera clubs nation-wide were making servicemen's portraits to be sent to their families? This was a worthy thing, indeed. And now a repeat performance is needed because the presence of so many Americans in uniform is required in various parts of the world.

But you can't wait for somebody to call on you or lead you into this picture-taking activity. Rather, you must get *your* group going on it at once. I surmise that a majority of clubs are located somewhere near a military or naval base of some sort, where boys are being trained or are awaiting shipping orders. The kids don't know *you* or know where you are—you've got to seek them out and set up the deal.

Depending on local situations, you can make outdoor mug shots or set up a club portrait studio for fairly rapid sittings under controlled conditions. Important thing, of course, is to process the work quickly and get prints on their way to the men's homes.

Same sort of deal works well the other way, too—taking pictures of the men's families for mailing to those in uniform. As mentioned in this space, several movie clubs have done quite a job on this since the Commies asked for trouble in Korea. But as yet I've heard of no great number of intensive still-picture club operations along this line.

The routine is going to cost a little something, whether it's stills or movies, to be sent overseas or back home. So what? Skip the refreshments once in awhile; forego some club or individual expenditure which really isn't as vital as you may have thought. It won't break you and the gang to lay out a few dollars for film, paper, lamps, and mailing. It won't kill you to spend some time seeking picture subjects of the kind under discussion here. Any of you who have pulled guard duty or four-hour watches knows that it's a case of being stuck with it, Mac, and no home to go to for a lot of long nights. In that spot a picture sent or received can mean a lot.

What's holding you people? Start *your* club picture project for servicemen and their families right away!

Stereo Show Aids the Blind

Those who can never see were helped by some whose hobby is putting photography into three dimensions in order to see better recently. Occasion was *Chicago Stereo Club's* benefit showing of the Lighthouse stereo show at Chicago's Art Institute. An audience of 165 paid a dollar each to view this international stereo color slide exhibition, the entire proceeds going to the rehabilitation program of Chicago Lighthouse for the Blind. The club had guaranteed the charity $100, the additional $65 being just that much more to aid the sightless. Entries in the show were received from as far away as Switzerland this time.

Club Need Equipment? Try This

Photographic Guild of Detroit continues to get profit and pleasure from its unique series of "dinner-travelogs." Idea is that periodically some *Guild* member's set of travel slides is shown following dinner at another member's home. Those interested make reservations in advance, come to dinner, pay a modest fee for the meal and a raffle ticket, stay for the slide show.

When last heard from, the *Guild* had held three such gatherings, thereby raising enough money to purchase two slide projectors, a new screen, and a case to hold slide boxes, extension cords and other incidentals. Raffle drawing was to be held shortly after our deadline for this issue. Lucky winner will be entitled to a 16x20 oil painting of his or her favorite transparency or an oil portrait of himself.

Want more details? Write to Miss Audrey Gingrich, 706 Hazelwood Ave., Detroit 2, Mich.

We Hear . . . That the editor of *Oklahoma Camera Club's* very readable "Hypo Check" is a busy housewife, Mrs. J. A. Bush. She handles this club chore between sessions of making beds, scrubbing the kitchen floor, dusting and cooking. A deep bow to you, Mrs. Bush!

On the subject of club bulletins, *Chicago Stereo Camera Club* now puts out a good one called "Stereo Flash," Lucille Kosinske, editor. You can write to Lucille at 555 Stratford Pl., Chicago 13, Ill. . . . And *Alameda Photographic Society's* "Cable Release" is greatly improved typographically. (Another lady, Adele Rowe, edits this one. Good going, Adele.)

Still on the subject of club papers, I see that the editor of one of them is having a little trouble with the use of the imperative. In a page and a half of a recent four-page issue, this boy used the word *shall* incorrectly no less than 12 times—a neat trick indeed. Samples: "The board of directors shall hold their meeting . . . 32 clubs shall be vying for honors . . . no competition shall be held this month . . . the club shall hold its dinner and party . . . fill in the number of guests you shall bring . . ." Gosh, mister, let's watch this, *shall* we? Remember, where there's a *will*. . . . Seriously, good writing is as important to a club bulletin as is any other factor.

Program idea: *Harrisburg* (Pa.) *Camera Club* comes up with a "What-is-it?" print contest. Entries are photographic oddities as unrecognizable as possible. Subject matter is fairly common material approached from an unusual viewpoint. Entries are hung during a meeting, and the print receiving the fewest correct identifications wins. (Think I saw such a show once—but it was a one-man deal by a Continental snapshooter, and was supposed to be Big Stuff.)—

Hollywood report

By Louis Hochman

Nature Goes Hollywood

Seems nature can't satisfy a Hollywood landscape artist. To pretty up a Nevada desert for the Technicolor cameras on 20th Century-Fox's *Gobi Outpost* location, crewmen sprayed the dusty sagebrush with green paint, toned the glaring white rocks down to a softer brown, and supplemented the natural rocks of the wasteland with a few of the papier-maché variety. The grandiose make-up job consumed 130 gallons of paint and thinner.

If a Body Meets a Body

In 20th's *Niagara*, cameraman Joseph MacDonald worked out a morbid lighting effect for a scene in which Marilyn Monroe visits a morgue to view a body. Although in Technicolor, the scene has a drab black-and-white quality with Marilyn contributing the only splash of color. MacDonald did this by having the set painted black and white and carefully lighting Marilyn to emphasize her radiant coloring.

With Marilyn at such close range, however, the corpse (Richard Allan) had difficulty staying dead and fluffed a take by panting visibly. He was promptly fitted with a chest plate—a concealed metallic strait jacket which covers his chest but leaves enough space for undetected breathing.

•

OOPS! In my December 1952 column covering Disney's True Life Adventure Series, I mistakenly mentioned that the Milottes carried, among other cameras, an "Aeroflex." I should'a said, "Arriflex," and I might have mentioned that the Arriflex, a 35-mm camera since 1938, is now being made in 16-mm size and that the Milottes got one of the first ones. Thank you, Kling Photo Corp., for catching the unintentional slip.—

WATCH FOR . . .

The following features, currently showing at theaters across the country, are recommended as excellent examples of cinematography. They can be viewed with profit by both still and movie photographers.

THE THIEF—*United Artists*—Ray Milland, Martin Gabel, Rita Gam. Photography by Sam Leavitt, in black-and-white. Dialogueless picture shot in documentary fashion. Powerful photography and mood effects help tell story.

COME BACK LITTLE SHEBA—*Paramount*—Shirley Booth, Burt Lancaster, Terry Moore. Photography by James Wong Howe, in black-and-white. Dramatic low-key lighting and camera angles. Unusual treatment in scenes of domestic disorder.

STARS AND STRIPES FOREVER—*20th Century-Fox*—Clifton Webb, Ruth Hussey, Debra Paget, Robert Wagner. Photography by Charles G. Clarke, in Technicolor. The story of band leader John Philips Sousa done in beautiful color. Pastel-like tones.

HANS CHRISTIAN ANDERSEN—*Samuel Goldwyn Production* — Danny Kaye, Farley Granger, Jeanmaire. Photography by Harry Stradling in Technicolor. Beautiful color photography, particularly the dance sequences. Outstanding underwater ballet sequence.

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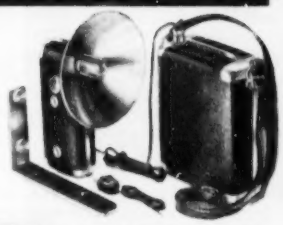

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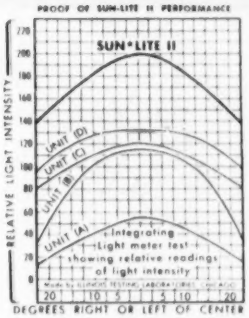

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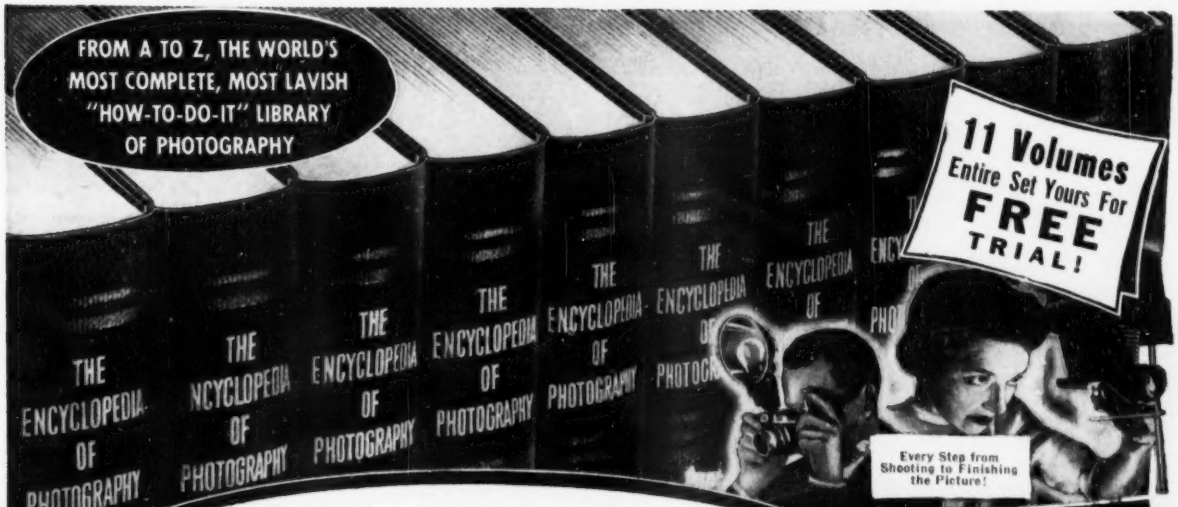

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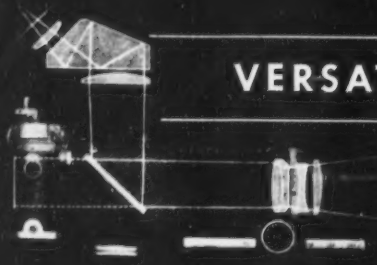

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Calendar of photographic exhibitions

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20th Detroit International Exhibition of Photography, Detroit Institute of Arts and the Photographic Salon Society of Detroit, Detroit, Mich.

Closes Feb. 20, 1953.
Entry fee $2 four prints and $1 four color slides allowed.
On exhibition at Detroit Institute of Arts, Detroit, Mich., April 7 to 26, 1953.
For information and entry blanks, write Gregor S. Affleck, Pres., 6140 Charles St., Detroit 12, Mich.

40th Annual Pittsburgh International Salon of Photographic Art*, Pittsburgh, Pa.

Closes Feb. 25 (prints); March 4 (slides).
Entry fee $1; four prints or slides allowed.
On exhibit at Carnegie Institute Galleries of Fine Arts, Pittsburgh, Pa.
For information and entry blanks, write Walter F. Kneeland, 3658 Perrysville Ave., Pittsburgh 14, Pa.

9th San Francisco International Color Slide Exhibit*, The Photochrome Club, San Francisco, Calif.

Closes March 1, 1953.
Entry fee $1, four slides allowed.
On exhibit at San Francisco Museum of Art, March 14 to 24, 1953.
For information and entry blanks, write Burton H. Ladensohn, Photochrome Club of San Francisco, P. O. Box 188, San Francisco 1, Calif.

1953 Solihull Easter Salon of Pictorial Photography*, Solihull, Birmingham, England.

Closes March 5, 1953.
Entry fee $1, four prints and/or slides allowed.
On exhibit at Malvern Hall, Solihull, from April 11 to 18, 1953.
For information and entry blanks, write C. D. Pain, Hon. Salon Secy., 71, Beaks Hill Road, Kings Norton, Birmingham, 30, England.

1953 Seattle International Exhibition of Photography*, Seattle Photographic Society, Seattle, Wash.

Closes March 9, 1953.
Entry fee $2, four prints allowed.
On exhibit at The Seattle Art Museum April 8 to May 3, 1953.
For information and entry blanks, write Arthur Henning, 4516 East 60th St., Seattle, Wash.

2nd Exhibit of Wild Animals, New York State Museum, Albany, New York.

Closes March 10, 1953.
No entry fee, four prints allowed.
On exhibit at Museum, April 1 to 30, 1953.
For information and entry blanks, write W. J. Schoonmaker, New York State Museum, Albany 1, N. Y.

4th International Color Slide Festival of Turin*, Societa Fotografica, Subalpina, Turin, Italy.

Closes March 15, 1953.
Entry fee $1, four slides allowed.
On exhibit in Hall of "La Stampa," Turin, May 1 to 15.
For information and entry blanks, write Dr. Renato Fioravanti, Societa Fotografica Subalpina, Via Bogino 25, Turin, Italy.

17th South African Salon of Photography*, The Johannesburg Photographic and Cine Society, Johannesburg, South Africa.

Closes March 15, 1953.
Entry fee $1, four prints allowed.
On exhibit at Johannesburg, during May through August, 1953.
For information and entry blanks, write Hon. Sec'y, South African Salon of Photography, P. O. Box 7924, Johannesburg, South Africa.

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Get Closer

(*Continued from page* 71)

lens, transferring it to the taking lens when you are ready for the exposure. It is also advisable to use a tripod or other firm support. No increase in exposure is necessary.

If you're not now using these simple lenses you're unnecessarily limiting the scope of your picture-taking activities. For your guidance the annual Directory Issue of PHOTOGRAPHY has a complete section on supplementary lenses.—

Tools and Techniques

(*Continued from page* 24)

source; (2) nonuniformities in response from one area to another of the cell, resulting in different readings at different illumination intensities; (3) the use of direct linear diaphragms which make it difficult to adjust the meter to the red-filter standard at high intensities where the aperture is small and its area is changing rapidly, and (4) movement of the instrument when the filter-shifting trigger is actuated. The paper goes on to describe a two-point meter utilizing red and blue filters which is claimed to negate all four of the aforementioned shortcomings. It is interesting to note that this work makes no reference to the green component of light upon which the controversial paper by Crandall, Freund, and Moen in the July 1950 issue of the *Journal of the SMPTE* was based—*Effects of Incorrect Color Temperature on Motion Picture Production.* (See also T&T, December 1950, POPULAR PHOTOGRAPHY.)

Portable Tape Recorder. A deluxe all-battery powered tape recorder weighing less than 13 pounds, the "Cub Corder" is now being made and distributed by Ectro, Inc. of Delaware, Ohio—formerly Ciro Cameras, Inc. Both the motor and amplifier of the new unit are operated by a battery of non-spilling rechargeable wet cells and compact dry cells which have a capacity of 450 hours of recording and/or playback time. The instrument is always ready for instant use, being actuated by pressure on the handy microphone switch. Operating speeds of 7½ and 3¾ inches per second are provided, with a flat frequency response up to 6,000 cycles per second. The unit is housed in a tan leather-grained case equipped with a handle and a shoulder strap; price —$295, including microphone, case, and batteries. (The first completely portable unit of this type, the Magnemite, described in T&T for March 1952, featured a dry-battery operated amplifier and a spring-wound motor capable of running 15 minutes on a full winding.)

Special Speed Lens. The construction details of a versatile new taking lens of unprecedented speed, the Kodak *f*/0.75 Fluro Ektar (U.S. Patent 2,604,013 Aug. 8, 1951), are given in an appendix to the paper *X-ray Motion Picture Techniques*

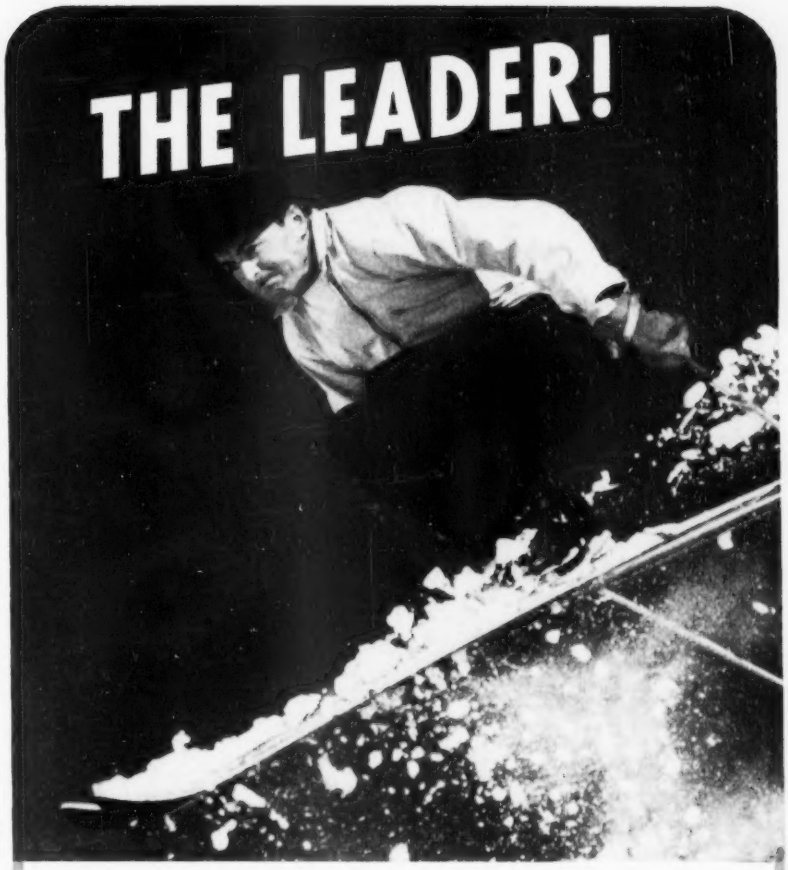
Employed in Medical Diagnosis and Research by S. A. Weinberg, J. S. Watson, Jr., and G. H. Ramsey in the October 1952 *Journal of the SMPTE*. According to the appendix, which was contributed by W. E. Schade of Kodak's Hawk-Eye Works, the principal purpose of the objective is 35-mm cinefluorography at a magnification of 1:16, yet applications to other fields are confidently expected on the basis of performance to date. The new system which has a focal length of 110 mm is comprised of seven glass elements, two of which are made of the high-index glasses recently developed by Kodak. Its design can be described either as a Cooke triplet with a telephoto system attached or as an extended modification of the Cooke triplet with a negative field-flattening element added near the focal plane. Spherical aberrations are said to have been reduced to an extreme minimum, along with astigmatism and field curvature while barrel distortion is negligible and longitudinal as well as lateral color corrections are fulfilled.

Odds & Ends. Last year, both Ansco and Kodak introduced plastic flash reflectors to the market—mainly in connection with popular flash-camera outfits. In addition to saving scarce aluminum, the use of plastic shells over which a metal surface is applied has led to a more durable product with superior reflectivity. Plastic reflectors can neither be bent out of shape nor dented, as is the case with all-metal reflectors that have been bumped or subjected to pressure.

. . . A recent release from du Pont reveals the fact that their "Freon-113" fluorinated hydrocarbon, a nonflammable liquid used as a coolant in refrigeration and air-conditioning systems, has proven to be an efficient photographic film cleaner. The liquid is faster drying and much less toxic than fluids now being used as cleaners in motion picture studios, and it has less tendency to cause color images to lose their saturation. Some film laboratories have found that adding a small amount of beeswax to "Freon-113" makes it possible to clean and lubricate film in a single operation.

. . . Klaus Karpf, proprietor of Linhof Camera Works, Munich (West Germany), the only Continental manufacturer of press-type cameras (Technika, etc.), reported at the end of a recent 5-week visit here that the factory is as much as 18 months behind on orders—this, despite a recent plant expansion that has expanded the working force to 800 people. Continuing demand of U.S. photographers for larger cameras was Mr. Karpf's reason for this prosperity.

. . . New Model "70" slide and film-strip projector by Beseler of Newark, N. J., is intended to service industrial accounts that have been swinging over into 70-mm microfilm for storing large X-ray records and other copy having fine detail. Either 127 or 135-mm lens is supplied along with 300-watt, T-10 lamp; price: $225 with 127-mm lens, $250 with 135-mm.—



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1952: Best of the New York Press

(*Continued from page* 50)

choose the final winners. Discussion of individual pictures increased, and on two occasions photographs already discarded were brought back under consideration—and scored.

An outstanding triumph was tallied by

Shocker by Osmund LeViness, the *Daily News*, shows shooting victim with bullet protruding from her breastbone a scant half-inch from jugular vein. Picture placed first in spot news and thereby won Joseph Medill Patterson Award.

the *Daily News* photographic staff in making a clean sweep of the spot news class. Number one winner in that class, Osmund LeViness (a past president of PPANY), automatically took the Joseph Medill Patterson Award—$500 in cash. The award was established this year in memory of the late publisher of the *Daily News*. By coincidence, Arthur Abfier of the *Mirror* staff also won a trophy established by his paper: it was the Izzy Kaplan Memorial Trophy, awarded to the first-prize winner in the sports class.

Winners in the eight classes are:

SPOT NEWS: 1. Osmund LeViness, *News;* 2. Fred Morgan, *News;* 3. Pat Candido, *News*. Honorable mention; Everett Breuer, *News*, and Gordon Rynders, *News*.

ANIMALS: 1. Irving Tuttle, *Newark* (N. J.) *Evening News;* Charles Carson, *Journal American;* 3. Arthur Sasse, International News Photos. Honorable mention: Arthur Sasse; and Nat Fein, *Herald-Tribune*.

SPORTS: 1. Arthur Abfier, *Mirror;* 2. Anthony Sande, United Press Newspictures; 3. Ernest Sisto, *Times*. Honorable mention: John Rooney, Associated Press, and Ernest Sisto.

GENERAL NEWS: 1. Dan McElleney, *Mirror;* 2. Phil Greitzer, *News;* 3. Ed Clarity, *News*. Honorable mention: William Finn, *Journal-American*, and Vincent Lopez, *Journal-American*.

PICTORIAL: 1. Patrick Burns, *Times;*

2. Meyer Liebowitz, *Times*; 3. John Rooney, Associated Press. Honorable mention: Morris Warman, *Herald Tribune*, and Andrew Lopez, United Press Newspictures.

FEATURE: 1. Vincent Lopez, *Journal-American*; 2. Morris Warman, *Herald Tribune*; 3. Arthur Abfier, *Mirror*. Honorable mention: David McLane, *News*, and Ed Clarity, *News*.

SPEEDLIGHT SPORTS: 1. Herbert Scharfman, International News Photos; 2. Mathew Zimmerman, Associated Press; 3. Fred Morgan, *News*. Honorable mention: George Torrie, *News*, and Jack Frank, *Herald Tribune*.

PORTRAIT: 1. Bert Brandt, United Press Newspictures; 2. Sam Schulman, International News Photos; 3. Roger Higgins, *World-Telegram and Sun*. Honorable mention: Mathew Zimmerman, Associated Press, and John Lindsay, Associated Press.—

Nice Work If You Can Get It

(*Continued from page* 69)

many similar movies to follow. It contained the first natural-light night scenes ever recorded—on hypersensitized negative—and used hidden cameras to film candid shots.

Immediately after *Berlin* was released in America, the Eastman Kodak Company cabled him an offer to buy the patent rights for his "fast" film. His answer was that he had taken the hypersensitizing data from one of Kodak's own books! Freund received an Oscar in 1937 for filming *The Good Earth*. In addition to directing many pictures, he also pioneered the use of magnetic wire recording, and helped to develop the incident light exposure meter and the Spectra color temperature meter, through his organization, Photo Research Corporation. His latest triumph is the filming of Lucille Ball's *I Love Lucy* television show, which is establishing a new high in TV entertainment.

Already a legend in Hollywood and among all who appreciate great movie camera work is Gregg Toland, who died in 1948, having literally burned himself out at 44. His Horatio Alger rise to the top began at 15, when he arrived in the film capital without money, influence, or formal education, possessing only an intense desire to shoot movies. He began as a messenger on the old Fox lot, later became assistant to George Barnes, and went to Goldwyn with him. During his 22 years with Samuel Goldwyn he shot some of the finest pictures of all time: *Dead End*, *Intermezzo*, *The Best Years of Our Lives*, and *Wuthering Heights* (for which he won an Oscar in 1939). For director John Ford he photographed *The Grapes of Wrath* and *The Long Voyage Home*—the latter a cinematic masterpiece in which any single frame can be blown up into a salon print. Toland is best remembered, perhaps, for *Citizen Kane*, in which he introduced his then-revolutionary deep-focus technique. Orson Welles, realizing that great cinematography would enhance the story, gave Toland full rein

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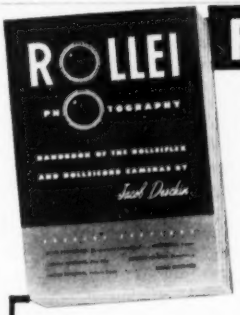

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Toland's sensitive camera imparted a definite style, mood, and atmosphere to every picture he filmed. He rarely used the same technique twice, but each time devised lighting and camera work that aided in telling the story. His many innovations, both artistic and technical, will be remembered long after many a star has faded.

These four men — Bitzer, Rosher, Freund, and Toland—exemplify the genius and brilliant originality of top motion picture cameramen, qualities possessed by many others, like those whose pictures you see on page 67.

Here are more of the great names in Hollywood cinematography (to supplement the picture gallery of cameramen on page 65), and the pictures they're perhaps best known for: Lee Garmes, *Detective Story;* Alfred Gilks, *An American in Paris;* Bert Glennon, *Stagecoach;* Ernest Haller and Ray Rennahan, who collaborated on *Gone with the Wind;* Ray June; Hal Rosson, *The Asphalt Jungle;* William Mellor, *A Place in the Sun;* Joseph Walker, *Lost Horizon.* It is not surprising that a number of cameramen have become movie directors. Some of the best known of these are Rudy Maté, Ted Tetzlaff, George Stevens, Victor Fleming, Wesley Ruggles, Byron Haskins, and Ernest Schoedsack.

Of the two biggest advances in movie-making history—sound and color—it was sound that caused the greatest furore in Hollywood. When it was introduced in 1926, it turned the film town upside-down. Now, on the set, the sound man was king; his word was law. Cameramen had to make many concessions and sacrifices so that the movies could talk. The greatest loss was the camera's recently-discovered mobility; now, mounted inside the giant "ice-box" required to silence it, it could no longer roam freely about the set. But here, as in other crises, the seasoned cinematographer came through; he used many cameras, shooting the same scene, and put the film together in the cutting room. This required the employment of a small army of operating cameramen and assistants, most of whom were put out of work a few years later when sound-on-film movie making returned production to normal. It was not until very recently, when the need for television and 16-mm commercial cameramen increased, that these men found employment once again.

Sound removed the haphazard methods of the silent films. Everything had to be precisely controlled. "Control" was now the magic word; no more guessing on setups or rule-of-thumb developing of valuable film. Pictures were now shot "on paper" first; the story board came into existence, and the production designer took over. Decisions were made long before the camera was ready to roll.

Culver Service

Lady in transit: Dorothy DeVore does a boudoir scene in the wide-open spaces for an Al Christie comedy of the mid-twenties. Early cinematographers were as ingenious as today's!

The achievement of control can be attributed directly to Technicolor, which forced standardization of many photographic variables. Definite speed ratings of films were established, and exposure meter and viewing glasses were used to check and balance lighting.

While the present-day cameramen's lot has improved in many respects, the old freedom and recklessness are gone. Sound, plus the background process screen, have brought movie-making indoors. The old days of roaming the wide outdoors for thrills are gone, except for the privileged few. It is only recently, since the end of World War II, that frozen foreign funds and the shift to semi-documentary techniques have caused major studios to send camera crews across the world to film pictures like *The African Queen, Quo Vadis, Ivanhoe, King Solomon's Mines,* and *Roman Holiday.*

Where does cinematography go from here? The average age of Hollywood's first cameramen today is 59, while the operators average 50 years. Ten years will find the front ranks depleted by retirement and death. Will the movie colony's closely-guarded technical hierarchy thus destroy itself? The next decade will tell whether Hollywood's cinematography will continue to be what it unquestionably is today—the tops!—▶

contests and markets

CONTESTS

SCHOLASTIC MAGAZINES announce the annual Scholastic-Ansco photography awards in black-and-white and color, open to all students in grades 7 through 12, regularly enrolled in public, private, or parochial schools in the United States and its possessions. Students living in certain regional areas must submit entries for preliminary judging in regional exhibitions. There are 15 classifications with prizes of $50, $25 and $15 for the first three awards in each classification. Awards for photographs taken on Ansco film are doubled. The basic prizes are also duplicated by Sylvania for photographs taken with Sylvania flashbulbs. Sylvania also offers a special award of three cases of flashbulbs. The Fred Archer School of Photography, Los Angeles, Calif., offers two scholarships; the Art Center School, Los Angeles, offers one scholarship. The national contest deadline is March 15, 1953. Copies of the rules booklet, which includes 39 regional areas, are available from Scholastic Magazines, 351 Fourth Ave., New York 10, N. Y.

THE NATIONAL SCHOLASTIC PRESS ASSOCIATION announces the 1953 National High School Photographic Awards, open to all students attending any public, private, or parochial school regularly, from the ninth to the twelfth grades, inclusive. Classes of entry are: 1. Babies and children; 2. Young people and adults; 3. Scenes, and 4. Animal life. Students may enter any or all classes and submit as many pictures as they wish in each class. Only black-and-white, unretouched photographs from single negatives taken between May 1, 1952 and April 15, 1953 are eligible. Prints, which need not be developed or printed by the student, must be unmounted and, if enlarged, no larger than 7x7. No entry blanks are necessary. Name, address, school, grade, picture title, and class of entry must be written on the back of each picture. A total of $4,000 in cash prizes include a grand prize of $300 for the best picture in each of the four classes. Deadline is April 15, 1953. Entries should be mailed to: NSPA National High School Photographic Awards, 18 Journalism Bldg., University of Minnesota, Minneapolis 14, Minn.

THE NATIONAL PRESS PHOTOGRAPHERS ASSOCIATION and the ENCYCLOPAEDIA BRITANNICA announce the tenth annual competition open to any photographer who is a member, regular or associate, of NPPA as well as nonmember press photographers. However, only plaques of award will be given non-members, while NPPA members will receive material prizes. Only photographs taken or initially published between March 1, 1952 and February 28, 1953 are eligible. The classes are: Picture Portfolio (newspaper); Picture Portfolio (magazine); Picture Story (newspaper); Picture Story (magazine); Spot News; Feature, Pictorial; Sports; Portraits and Personalities; Sequence Photographs (magic eye), and Color. The winners in the Picture Portfolios classes will be known respectively as "Newspaper Photographer of the Year" and "Magazine Photographer of the Year." A Portfolio should include pictures from at least four classes and should comprise not less than 10 nor more than 20 pictures. (A Picture Story entered as part of a Portfolio counts as one picture.) A special award will be given to the woman photographer whose Picture Portfolio is judged to be the best of all those entered by women photographers. After judging of the Portfolios, pictures within both newspaper and magazine classifications will be assigned to individual classes for judging.

The Picture Story will be judged as a unit and should consist of not more than eight pictures, executed in a single editorial idea or theme. If a contestant wishes to have one print from his Picture Story judged also in an individual class, he must provide a separate print marked for that class. The Picture Story differs from a Picture Sequence in that the latter comprises any picture or pictures made with a sequence camera. A frame from a sequence will not be eligible for judging in any other class. A sequence may also include up to eight

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First prize in all classes will be a set of the Encyclopaedia Britannica as well as the second and third prize in the Spot News, Feature, and Pictorial and Sports classes. The Alan Graff award of $500 in cash will be given the "Newspaper Photographer of the Year." Prints should be mailed no later than February 28, 1953 to: Chairman, Press Photographers Competition, Encyclopaedia Britannica, 425 N. Michigan Ave., Chicago 11, Ill.

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RELIGIOUS NEWS SERVICE is in the market for religious news photographs from all over the country. These should be sent by fastest mail immediately following a development. Also desired are photographs of holiday and seasonal scenes, children at play or prayer, Bible still lifes, Sunday school and inspirational subjects and church activities of wide interest. Glossy photographs, 8x10, are preferred. Openings are available in some areas for regular photographer correspondents. Payment is $5 on acceptance. Write Religious News Service, 381 Fourth Ave., New York 16, N. Y.—

Powerful Developer

(*Continued from page* 44)

more actinic, the usual increase in effective film speed of about a full stop was obtained.

Enlargements made from 2¼x2¼ negatives were as small as five diameters and as great as 15. In most instances passable quality was achieved at ten diameters, but something between five and ten diameters is probably more reliable. The Super-XX roll-film negatives were noticeably less contrasty than the 4x5 Super Panchro-Press Type B sheet film negatives, and required only very little burning in of highlight areas.

Of the six domestic and foreign No. 120 roll film emulsions tested, only Super-XX gave us both speed and quality. The others fell into two general groupings as did those 4x5 and 35-mm films which we found impractical in SD-19a.

Films in the first group produced tremendous density, fogging, and grain when developed for the ten to fourteen minutes given Super-XX roll-film. When these roll films were given less development to reduce this atrocious fogging they just did not deliver any increases in effective film speed worth talking about.

Films in the second grouping produced clean, low-fog-level negatives even when pushed for greatly advanced immersion times, but did not deliver much more than about ASA 400 in the way of speed. Since this is already obtainable from developers like Promicrol, D-76, D76F and the like with finer grain and less contrast, they were dropped from our tests.

Seven different 35-mm emulsions were

tested. Best results were obtained with Kodak's Plus-X and Super-XX. With immersion times of nine to 11 minutes both delivered good quality at ASA 1,000 to ASA 1,600 in the same picture situations where ASA 2,000 and ASA 3,000 proved satisfactory for our $2^1/_4$x$2^1/_4$ roll-film tests. At just about 12 minutes the fog starts to build up with both 35-mm emulsions. Although this fogging is somewhat less with 35-mm Plus-X, it is still objectionable. Even within our nine to 11 minute range of immersion times it is sometimes very difficult to ascertain where one frame begins and the other leaves off. This increased edge fogging—far worse than any experienced with 4x5 or $2^1/_4$x$2^1/_4$—is due to 35-mm's lower threshold to fog and should be ignored.

Plus-X and Super-XX 35-mm negatives were enlarged from nine to 12 diameters with acceptable results. Highlights were often very heavy as with the other film sizes examined, but again they were never unprintable. The amount of contrast obtained with both of these 35-mm films is in between that obtained with our acceptable 4x5 and $2^1/_4$x$2^1/_4$ emulsions. Here again the cold-light or diffusion style enlarger proved kinder to the negatives than the harsh straight-condenser system.

In some cases the greater contrast of 35-mm Plus-X—especially in the thinner regions of the negative—paid off in better prints. However, some excessively contrasty situations benefited considerably from the flatter rendition of 35-mm Super-XX. Which of these films is "better" or "faster" in SD-19a is a matter for personal interpretation.

Looking at negatives of any size developed in SD-19a can be a terrifying experience to the uninitiate. You've never seen grain on a negative until you use SD-19a! The peculiar thing is that SD-19a produces negatives that look grainier than the prints made from them. This is because SD-19a deposits what might be called a marginal density in areas that ordinarily would be recorded as clear gelatin. When enlarged, these negative areas reproduce just as if they had been clear gelatin, the frightening grain simply being obliterated. The immersion times we have indicated for the various films we found acceptable all produce negatives which, while on the grainy side, are not objectionably so. The main thing is: Don't judge SD-19a grain from the negative; make a print first.

Although developing times may vary within a few minutes, and temperatures plus-or-minus two degrees from the norm of 68 F without noticeably affecting negative quality, some care should be taken to prepare Solution A as accurately as is possible. Too great an error in the concentration of either the hydrazine compound or the Anti-Fog #2 can lead to disaster.

For example, we attempted to adapt the SD-19a formula to the lower fog threshold of 35-mm film by increasing the amount of 0.2% solution of Anti-Fog #2 used in Solution A. This substance, whose chemical name is the mouth-filling 6-nitrobenzimidazole nitrate, acts to increase contrast in the shadow portions of

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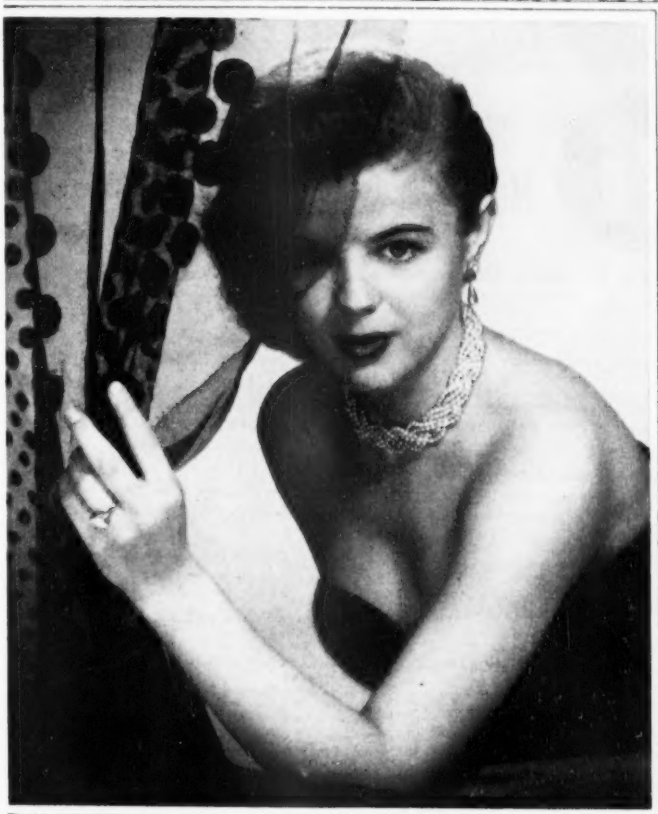

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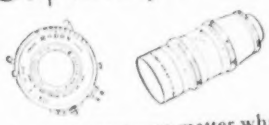

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the picture as well as to restrain the formation of fog all over the negative. With a trial increase of 25% we developed a roll of 35-mm Plus-X for 14 minutes, only to find that the fog was indescribably worse than before, and the negatives contained *less shadow detail* than identically exposed shots developed only 9½ minutes in the standard formula. Other attempts at altering the formula were similarly unrewarding and were abandoned quickly. Undoubtedly a qualified photochemist could adapt the formula to the special needs of many films which performed so miserably in SD-19a, but this proved beyond our capabilities.

Once mixed, the life of Solution A, or completely mixed SD-19a, can best be described as ephemeral. At room temperature it shows a loss in effective emulsion speed after about two hours. A Nikor tank of SD-19a left standing overnight, full to the brim and tightly capped, proved more than a full stop slower than when fully mixed. The best plan is to pour out the amount of 0.2% Anti-Fog

Formula for Kodak SD-19a

Solution A:	Avoirdupois, U. S. Liquid	Metric
0.2% solution Anti-Fog #2	2½ fl. oz.	20.0 cc
Hydrazine dihydrochloride*	96 grains	1.6 gm.
Water to make	4 fl. oz.	30.0 cc

Solution B: (available ready-mixed as Kodak D-19)		
Water (about 125 F)	64 fl. oz.	500.0 cc
Elon	128 grains	2.2 gm.
Sodium sulfite, desiccated	12 oz., 360 grs.	96.0 gm.
Hydroquinone	1 oz., 75 grs.	8.8 gm.
Sodium carbonate, desiccated	6 oz., 180 grs.	48.0 gm.
Potassium bromide	290 grains	5.0 gm.
Water to make	1 gallon	1.0 liter

To prepare the 0.2% solution of Anti-Fog No. 2, dissolve 30 grains of Anti-Fog No. 2 in one quart of hot water, or 2 grams in one liter.

To prepare a working solution of SD-19a, add one fluid ounce of Solution A to every quart of Solution B used, or 30 cc per liter.

Kodak D-19 has excellent keeping properties if kept stoppered tightly in brown bottles, as does the 0.2% solution of Anti-Fog No. 2. HOWEVER, once the hydrazine has been added to the Anti-Fog to make Solution A, the life of the mixture is not much greater than two hours.

The following procedure is recommended:

1. Bring Solution B to working temperature of 68-72 F.
2. Measure required solution of Anti-Fog solution and hydrazine.
3. At the very last moment, dissolve the hydrazine in the Anti-Fog solution, add water required, and combine with Solution B.

*Hydrazine is available in New York City from Kodak Professional Store, 1 West 39th St. Users outside New York can ask their local dealers to obtain it from Organic Chemicals Division, Distillation Products Industries, Rochester 3, N. Y. The Kodak product is referred to as Organic Chemical No. 1117. Hydrazine is also available from Eimer & Amend Division, Fisher Scientific Company, 633 Greenwich St., New York 14, N. Y.

WARNING: Hydrazine dihydrochloride is toxic, and has a dehydrating effect on hands and skin. It should be handled with great care.

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#2 and add the hydrazine dihydrochloride to the Anti-Fog #2 at the last moment, along with the amount of water needed to make up Solution A.

Because there is always the possibility that the green Wratten #3 inspection safelight for panchromatic materials may contribute some fogging, none of the negatives developed for this article were inspected. One roll of 35-mm shot for another purpose and developed in SD-19a was inspected, however. Although I have inspected everything I have shot over the past few years, it was found almost impossible to "read" the SD-19a negatives due to the strange way in which this surface fog shows up under the green safelight illumination. The best technique would appear to be the use of time and temperature based upon your own personal tests.

SD-19a must never be poured through the top of a daylight roll-film developing tank, as uneven developing will almost always result, along with streaking. To prevent this, fill your tank before turning out the lights to load the film onto the reel, and plunge the loaded reel quickly into the developer with a brief but vigorous initial agitation. Hangers for sheet film should likewise be immersed rapidly into the developer and agitated forcefully during the first few seconds of development.

Aside from these relatively minor considerations no special techniques are required with SD-19a development. Any standard rinse or stop bath—in all but one of our tests, plain water was used—and any regular fixing solution can be employed.

For the professional, SD-19a is a last resort. Jacob Loffman, the veteran PIX photographer, described it as being "a one solution developer and intensifier." The available-light crowd will still continue to process films in D-23, D-76, Promicrol and such, when they can shoot comfortably at ratings of about ASA 160 to ASA 400. While these popular standbys won't catch SD-19a's dust, they're much finer-grained. But when these soups don't give enough speed to stop action, to achieve great depth of field with small apertures, or even to make pictures, SD-19a can be counted upon for at least two—and in many cases three or four—stops more than any of the others can give you.

Ralph Baum sees SD-19a's greatest contribution in the 4x5 and 2¼x2¼ film sizes where lenses are generally much slower than those available for 35-mm. He says: "Photographers who believe that getting a slightly grainy picture is better than getting no picture at all, as well as those who feel that the constant use of flash produces static pictures, should consider SD-19a a reliable emergency procedure."

For the amateur, of course, SD-19a can be much more than an "emergency" developer. If he does not insist on very big enlargements, and if he is not a fanatical grain-hater, this formula can help to put his f/4.5 or f/6.3 lens into the class of high-priced f/2's, and permit him to make the kind of pictures he'd only dreamed of being able to get before.—

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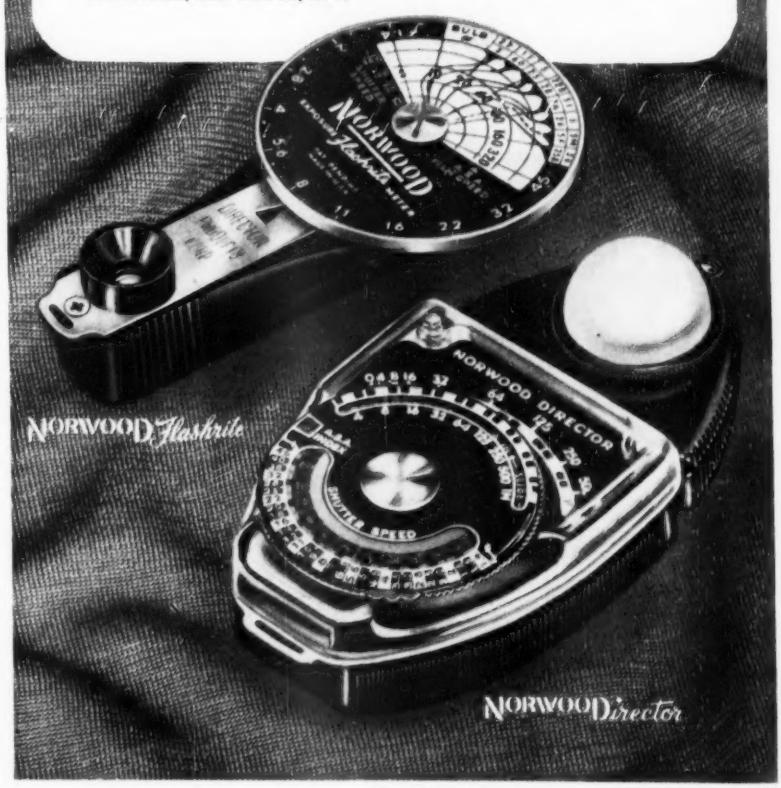

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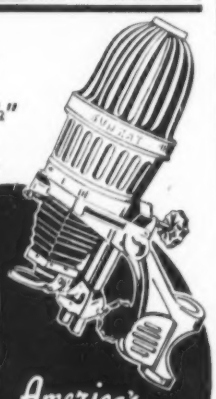

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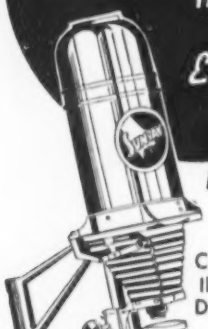

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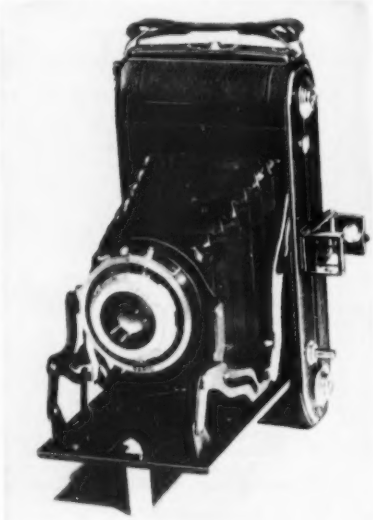
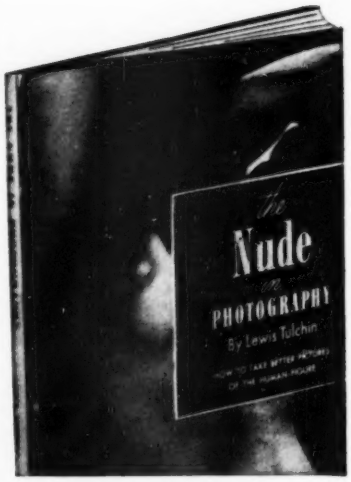


variable micrometer focusing is attained from 3 feet to infinity; diaphragm and shutter controls are visible from above; camera also has body shutter release, automatic self-erecting bed, two internally fitted tripod sockets and self-erecting viewfinder. The Edinex, of all-metal construction, weighs 21 ounces, is finished in chrome and Morocco leather. A flashgun is available in chrome, will take screw-base or bayonet-base bulbs. Camera is priced at $29.95; flashgun $6.25; leather holster case $5.50. For further information, write Camera Specialty Company.

NEAR-FOCUSING DEVICE, called the Auxiliary Reproduction device, which can be used with all Leica camera bodies and all 50-mm Leica lenses set at infinity, is made available by E. Leitz, Inc., 304 Hudson St., New York 13, N. Y. The accessory (called BOOWU in terse Leitz terminology) is designed to make it easier to take close-ups of manuscripts, pages from books, reference materials, flowers, and other small objects. Simple to adjust, it consists of three intermediate extension adapters and four extendable metal rods. Each tube is designed for a specific area coverage. User simply chooses desired intermediate adapter, screws the four rods into it, and pulls out the rods to length required to frame the area. The device is compact—can be carried in a brief case or accessory bag. It is priced at $24.

NEW CANON 35-mm CAMERA, the IV-S2, is announced by the import agent, Balfour, Guthrie & Co., Ltd., 67 Wall Street, New York 5, N. Y., and 351 California St., San Francisco 4, California, to supersede the Canon IV, introduced to the American market in 1952. The Canon IV-S2 retains all features of the Model IV and adds full synchronization with zero-delay speed flash as well as expendable flashbulbs. List price of the IV-S2 with Serenar 50-mm coated *f*/1.8 lens is $295; with the Serenar 50-mm coated f/3.5 lens, price is $250.50. Owners of Canon IV cameras, who have registered them, may have these cameras converted to the new IV-S2 specifications, *without charge*, by for-



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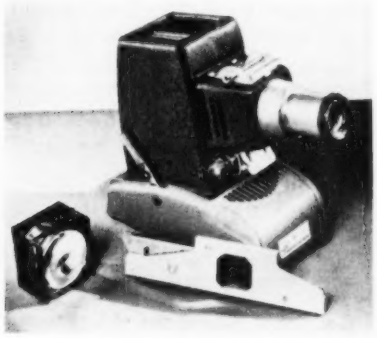


jector. The new spherical design condensing system places more light on the screen than did previous models; the autofocus changer has a rapid push-through action and correctly places each slide, regardless of mount, in the focal plane. Basic structural and optical merits of the 300-watt MC-300 have been retained in the new model. Price has been cut from $108 to $92, carrying case extra.

TWO PEANUT-SIZE FLASHBULBS, under the trade name Amplex-Norelco "My-T-Myte," are currently being marketed in the United States by the Amplex Corporation, 111 Water St., Brooklyn 1, N. Y. The new lamp, originally developed in Europe by Philips Industries, is offered in two sizes—

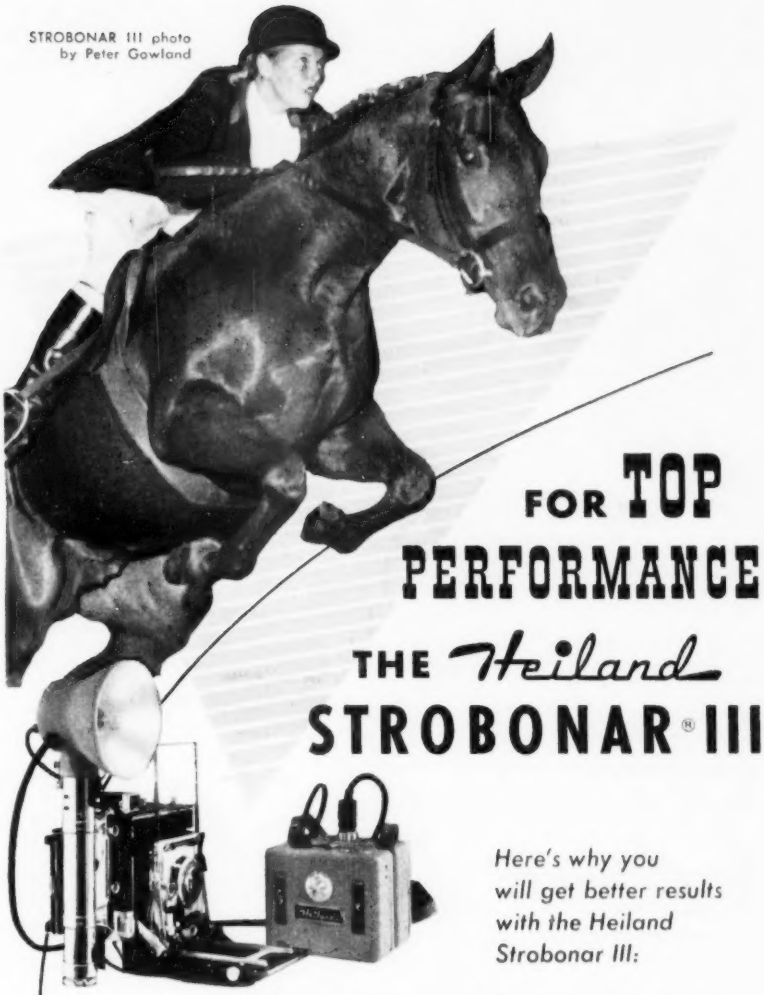
the PF3 (6,000 lumen seconds) listing at 11 cents each, and the PF4 (11,000 lumen seconds) listing at 12½ cents. The hydronalium wire-filled bulbs fit bayonet-type sockets and standard reflectors without need for adapters; they come in a handy 12-bulb package.

Supplementing the My-T-Myte midgets, Amplex is simultaneously placing on the market a full line of standard Amplex photoflash bulbs ranging through the usual sizes.

NEW TRIPOD, the U.P. Handi-Tripod, designed for rugged use is offered by the Uricheck Photo Co., 951 Burton St., Freeland, Pa. It is of iron and wood construction, painted red and gray, and extends to 36 inches. It is on sale in camera stores or can be purchased direct from Uricheck. Price is $5.85.

SOUNDSTRIPE PRICE REDUCTION from 3½ cents to 2½ cents per film foot is announced by Bell & Howell Company, 7100 McCormick Road, Chicago 45, Ill. Soundstripe is the company's method of applying to film a strip of magnetic material on which voice and music may be recorded in a magnetic recording projector. Balance striping, at no extra cost, will be applied to the film edge opposite the magnetic stripe to balance its thickness. Minimum charge for Soundstripe also has been reduced from $10.50 for 300 feet to $5 for 200 feet or less.

DOUBLE-EXPOSURE DEVICE for Automatic Rolleiflex cameras allows the user to make deliberate double exposures, makes possible limbering up of shutter in cold weather, release of shutter tension when camera is not in use, and eliminates film waste when flashbulb misfires. Such an installation is offered by any Eastern Camera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ALL-METAL TRIPOD, the light-weight Graphic Jr., especially designed for use with the Graflex "22" and other smaller cameras, has been released by Graflex, Inc., 154 Clarissa St., Rochester 8, N. Y. The new unit weighs 3 lbs., 10 ounces, has maximum extension of 56 inches, collapses to 25½ inches, and has built-in pan-tilt head. Price is $19.95.

SPEEDLIGHT UNIT that can be adapted to dry cell, wet cell, or a-c house current has been designed at Speedlight Center, 128 West 32nd St., New York, N. Y. The basic unit, called the Swifty, has no power source in itself, but is used in conjunction with one of the battery packs or the a-c box. The Swifty, resembling the Mighty Midget but weighing less because it does not need the Midget's condenser and rectifier build-up system, has a rapid build-up—three seconds

when used with two 225-volt dry cells in leather case; less than eight seconds with wet-cell pack. The dry-cell pack has a life of 3,000 flashes; the wet-cell pack, which has its own built-in recharger, will need recharging after each 250 to 300 flashes. The one-pound accessory a-c box permits unlimited shooting with the power cord plugged into house current. The Swifty mounts on the conventional press bracket at the side of the camera, or can be mounted onto the bottom tripod screw by means of a bracket which comes with each unit. Swifty sells for $59.95 without pack or accessories; the dry-cell pack lists at $19.95; the wet-cell pack with recharger is $49.95, and the a-c box $15.95.

IMPROVED MODELS of the single lens reflex camera, the New Alpa, are announced by Karl Heitz, Inc., New York City. The three models have been designated 4, 5, and 7. The compact, lightweight (22 ounces) camera is made of high strength metal alloy, with satin chrome finish and scuffproof covering. Model 7 offers a brilliant ground-glass image plus a single-window coupled rangefinder and multifocal "sports type" viewfinder. Models 5 and 7 have a built-in prism which re-inverts the picture correctly left to right. Film transport, cocking, frame-

counting, and shutter speed settings are done with one knob, facilitating fast sequence shots. Shutter release button has been shifted from the top to the front, eliminating possible camera shake during exposure. The reflex mirror flips up without vibration at the instant the shutter opens. Twelve lenses—from 38-mm to 2,000-mm are available, including the new Kern Switar

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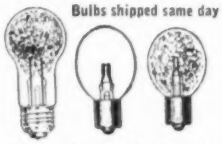

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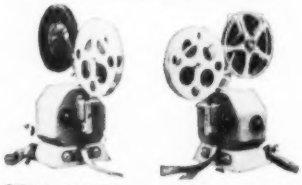

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Apochromat 50-mm f/1.8. Price of the Alpa 4 Reflex, with the 50-mm f/1.8 Apochromat is $369; the Alpa 5 Prism Reflex, with same lens, sells for $439; and the Alpa 7 Prism Reflex with rangefinder, multifocal viewfinder, and same lens lists at $479—each including F.E.T. Prices with other lenses are proportionately less. For brochure, see your dealer or write to Karl Heitz, Inc., 150 W. 54th St., New York, N. Y.

IMPROVED FILM SPLICING CEMENT, Craig Safety Film Cement, is offered by The Kalart Co., Inc., of Plainville, Conn. The new cement, known as Formula No. 7, splices film having any type of base including the newer base materials such as triacetate. The new formula is fast drying, does not deteriorate or spoil when left uncovered, and it is easier to clean excess cement from splicer and film. It is neither caustic nor corrosive and, although inflammable, its lower flash point lessens fire danger. It is available in one-ounce bottles at photographic dealers; price is 40 cents.

PLASTIC CASE for filters and metal attachments is introduced by EdnaLite Optical Co., Inc., Peekskill, N. Y. Known as the Universal Karry-Kase, the case is saddle-stitched and separates and holds filters in a cushioned position. There are compartments for lens shade, retaining ring, or other attachments. Four sizes are available—Series I at $2; Series V at $2.25; Series VI at $2.50, and Series VII at $3.25. Complete information is available from the manufacturer.

LEICA AND CONTAX camera owners now have available the Nokton f/1.5 lens, 50-mm focal length, to fit their cameras. Made by Voigtlander, the Nokton f/1.5 is a seven-element anastigmat lens, hard-coated, in handsomely-finished mount, with click stops. Full speed of the lens may be used—even at maximum aperture, pictures are sharp from edge to edge, the distributor reports. It is priced at $185, and packaged in a protective, transparent plastic case. See it at your dealer or write to the American distributor, Willoughbys, 110 West 32nd St., New York 1, N. Y.

PORTABLE HUMIDIFIER, the New Sherwood Table Model Humidifier, is being produced by The Abbeon Supply Co., 179-23 Jamaica Avenue, Jamaica 32, N. Y., with the interests of the darkroom laboratory worker in mind. The unit, of heavy gauge aluminum, is finished in green enamel, and requires no installation—being simply plugged into an electric outlet. It uses no steam or heat and draws electric power equivalent to that of a 30-watt bulb. A humidifier of this size will take care of one, two, or three rooms. It vaporizes moisture at the rate of better than one pint an hour. Price is $59.50. Literature and further information can be obtained by writing to the manufacturer.

PENTAX SPORTSFINDER, a new accessory for the Iloca Stereo II, is announced by the United States distributor, Ercona Camera Corp., 527 Fifth Avenue, New York 17, N. Y. The finder, of the folding, open-frame type, features a built-in spirit level to insure horizontal alignment; it slips onto the accessory clip and has its own clip to accommodate additional accessories. All metal in construction and finished in chrome, the Pentax Sportsfinder retails for $7.50. It is made by Iloca Camera Works of Hamburg, Germany (Western Zone).

EMDE ALUMINUM MASK Stereomounts are introduced by Emde Products, 2028 Stoner Ave., Los Angeles 25, Calif. The new mounts consist of three parts—the self-aligning and locking aluminum mask, one-piece aluminum frame, and micro glass protective covers. Film is merely slipped under aligning-locking nibs, top of mask folded over, placed between glass, and slipped into frame. Masks are made in three accepted film spacings and stereo window sizes, for either viewing or projection: normal, medium, and close-up. They are packaged in boxes of 20 at $3.50; boxes of 100 at $16.50. See your dealer for further details, or write direct to Emde Products.

NEWS NOTES: Steiner Associates, South Baker Bldg., Ithaca, N. Y., offers a new photographic reference guide, the Photo Fact File, which contains 100 indexed cards compiled to include data on every popular aspect of photography including portraiture, color, formulas, kinks, depth of field, and flash. All are cross-indexed and housed in a desk-size filing box. Additional supplementary cards are issued regularly. Price is $4.50 postpaid from Steiner, or it may be purchased at your dealer's.

A new, non-inflammable, non-toxic solvent formulation is now being used in all its anti-static film cleaners (ECCO No. 1341, No. 1500, and Photo-Sweep), according to Electro-Chemical Products Corp., 60 Franklin St., East Orange, N. J.

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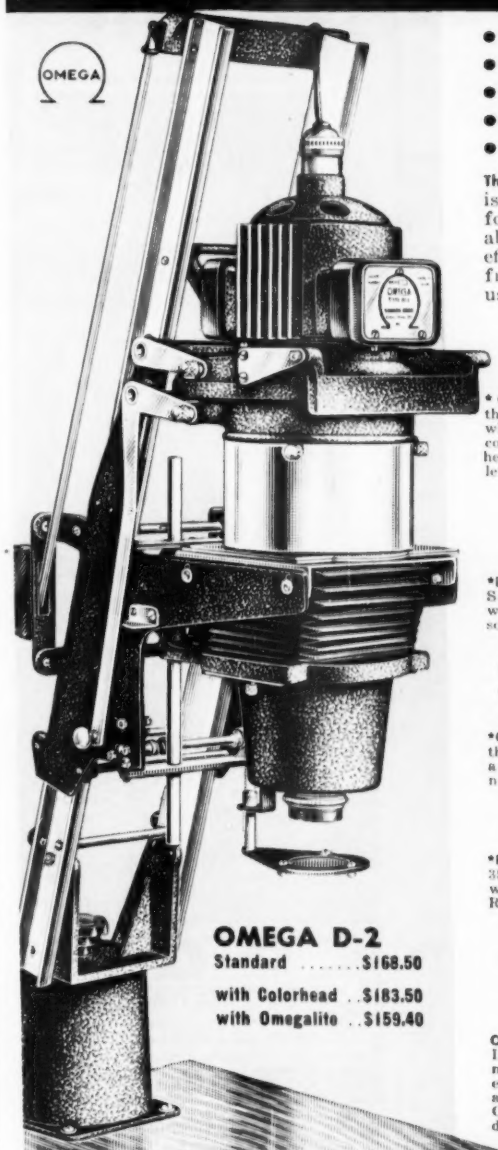

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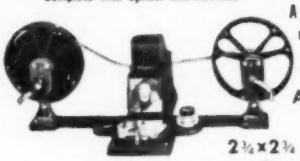

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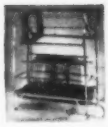

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